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1979

BUREAU of LAND MANAGEMENT

SPOKANE DISTRICT

BOTANICAL FIELD INVENTORIES

1979

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By  
Pam Camp  
and  
Gary Horn

## INTRODUCTION

Botanical surveys were conducted by the Spokane District of the Bureau of Land Management from early April through August 1979. This project was undertaken to gather field data on suspected rare, threatened, and endangered plant species found on some of the 311,000 acres, of scattered land parcels administered by the BLM in the State of Washington. Areas were surveyed in Benton, Douglas, Ferry, Stevens, Okanogan, Franklin and Yakima counties and ranged from sagebrush to grand fir habitat, 200 - 7,200 feet in elevation and varied from 7 to 28 inches in the amount of annual precipitation.

Prior to the field season two weeks were spent collecting habitat and phenology information from herbarium records and from the files of the Washington Natural Heritage Program.

Field studies emphasis was determined by: 1) areas of priority for the Unit Resource Analysis reports (URA); 2) planned timber sale units; 3) sites of unique habitat or suspected endangered or threatened flora and 4) areas of high public interest.

A comprehensive plant inventory was the method chosen to conduct the survey. Field collection trips were coordinated with phenology latitude, elevation and habitat types. All plants encountered were identified, collected (if the species population was stable) and 35 MM photos taken. Information on community types, composition distribution was also noted. The specimens collected are currently being processed for a district herbarium.

The BLM wishes to express thanks and gratitude to Dr. Kenneth Swedberg and Dr. Robert Carr of Western Washington University, Dr. Amy Jean Gilmartin and Joy Mastrogioseppe of the Washington State Herbarium, Tony Basabe of the Natural Heritage Program in Olympia, Steve Gill for contributing on Nicotiana, and Rich Old of the Cooperative Extension Service USDA for help and interest during this project.

## PHYSICAL AND VEGETATIONAL DESCRIPTION AND FINDINGS OF THE STUDY AREA

Two areas, the Sand-Dune Juniper Forest and Horse Heaven Hills, received special emphasis. The Sand-Dune Juniper Forest Region is located 18 miles northeast of Pasco in Franklin County. This area is interesting, being one of the largest remaining stands of western juniper (Juniperus occidentalis) in Washington. It also represents one of the northern most extensions of this species. It is found commonly throughout eastern Oregon where it forms an intermediate zone between ponderosa pine forests and big sagebrush. Western juniper is the most xeric of the tree-dominated zones here in the Pacific Northwest. Perhaps the most interesting aspect of this juniper community is its isolated occurrence in an area usually dominated by sagebrush. The stand covers a total of less than 600 acres scattered in clumps in an area of about 2,000 acres. Some believe these trees represent a relict community persisting from an earlier period when the climate was more conducive for their growth (Williams 1975).

The elevation of the area contouring the major juniper concentrations ranges from 800 to 1,100 feet. Annual precipitation is between five and ten inches. Temperatures may exceed 100 degrees in summer and fall below zero in winter. Winds tend from the southwest, and soil material ranges from fine sandy to loamy sand.

The topography consists of a complex arrangement of large sand dunes, small ravines, low ridges, gentle sloping valleys, and a large number of hummocks interspersed with blowouts. Some of the dunes attain heights of 300 feet or more. Many are actively migrating while others have been secured by a hardy, yet tenuous layer of semi-arid vegetation. The sands are believed to have been derived from sand bars along the Columbia River.

The Spokane District installed an enclosure around some 4,600 acres of the most impressive portion of the Sand Dune-Juniper Forest in 1972. All vehicle traffic was restricted to protect the fragile vegetative cover in this unique area.

The following information on habitat types was taken from Williams, 1975:

In the juniper groves or savannahs where western juniper dominates the habitat, cheatgrass is the most common associate. This grass forms thick mats around the base of trees. Other plants in the "Juniper Grove Habitat" which are common but secondary in abundance are: big sage brush (Artemisia tridentata), thick-spiked wheat-grass (Agropyron dasystachyum), blue grass (Poa sandbergii), and needlegrass (Stipa comata).

The "Sage-Grass Habitat" consists almost entirely of big sage brush Artemisia tridentata and needlegrass (Stipa comata). This association occurs in small patches a few acres or less throughout the study area.

"The Mixed Brush and Forbs Habitat" is the most abundant plant association to be found within the study area. Bitterbrush (Purshia tridentata), common rabbitbrush (Chrysothamnus nauseosus), and green rabbitbrush (C. viscidiflorus) are the prevalent shrubs, although none assumes dominance. Small amounts of big sage brush (Artemisia tridentata) is also present. There are a great number of small annuals and perennials in association with the shrubs. This habitat contains the greatest variety of plant species in the Sand Dune area.

The "Stabilized Grass Habitat" is rather limited in extent within the enclosure and occurs along the northern border of the study area. Sandberg's bluegrass (Poa sandbergii), needlegrass (Stipa comata), and cheatgrass (Bromus tectorum) are the prominent forms of vegetation. There are scattered individuals of big sage brush (Artemisia tridentata) and green rabbitbrush (Chrysothamnus viscidiflorus.)

What is described as a "Semi-stabilized Habitat" occurs near the crests of the big sand dunes which are found in the study area. On the individual slopes of the dunes, scurf-pea (Psoralea lanceolata) can be found. On the dune summits, yellow wildrye (Elymus flavescens) is predominant. Winged dock (Rumex venosus) and thick-spiked wheatgrass (Agropyron dasystachyum) can be found on the slip faces of the dunes.

In the northwest section of the enclosure there is a recently burned area. Here pioneer species of evening primrose (Oenothera pallida) scurf pea (Psoralea lanceolata) dominate.

Areas outside and immediately adjacent to the enclosure were also examined in a cursory survey to compare composition of the two areas. The major habitat types were sage-grass and mixed brush. This initial survey turned up no significant botanical differences.

Plants identified within and adjacent to the Sand Dune-Juniper Forest (all plants listed under Franklin County) can be found on pages 60 - 70 of this report. Gray cryptantha (Cryptantha leucophaca) listed on the Suspected Rare, Endangered or Threatened Plants of Oregon and Washington, (1979) and A Working List of Rare Endangered, Threatened, and Endemic Vascular Plant Taxa for Washington (1978), status undetermined, was found in fair numbers inside as well as outside the enclosure. It had been identified during the 1978 botanical survey and was known to occur here. For new location citations refer to page 59. The status report from last year, containing biological information on this species, can be found in the files at the Spokane office.

The Horse Heaven Hills region in Benton County is approximately 15 miles southwest of Richland and just south of the Yakima River near Kiona. The area is characterized by a series of gently sloping, E-W trending anticlinal structures. Elevations in areas surveyed averaged from 700 to 1,900 feet. Precipitation averages less than 12" per year. Vegetatively, the area can best be described as a Big sagebrush-wheatgrass (Artemisia tridentata, Agropyron spicatum) steppe.

The reconnaissance of the area, the middle of May, through the first of June covered the end of the spring blooming season.

Piper's daisy (Erigeron piperianus) was found in the Horse Heaven Hills in sparse numbers along the upper ridgetops. Rosy balsamroot (Balsamorhiza rosea) was also found on some of the ridgetops on the basalt washes but not with Piper's daisy. In areas where it occurred, it dominated the habitat. Thompson's paintbrush (Castilleja thompsonii) was found sporadically on the east slopes in the Artemisia tridentata - Agropyron spicatum association.

Erigeron piperianus - Balsamorhiza rosea are both proposed threatened on the Federal Register (1975), Suspected Rare, Endangered or Threatened Plants of Oregon and Washington (1979) and A Working List of Rare Endangered Threatened and Endemic Vascular Plant Taxa for Washington (1978). Castilleja thompsonii is listed on the latter one, status undetermined.

For additional information on the species; refer to their respective status reports on pages 7, and 26. A tentative plant list of this area can be found on pages 60 - 70 (all species listed in Benton County.)

Several days were spent inventorying the Douglas Creek, Rock Island Creek, and Sutherland Creek in the Moses Coulee region of Central Washington near Palisades in Douglas County. This is a fascinating area, characterized by isolated ephemeral and perennial stream courses which drain through basaltic coulee type terrain.



Big sagebrush-bluebunch wheatgrass is the predominant type in the area. Riparian areas and shallow basaltic washes are interspersed throughout.

Rare and endangered plants located in the Douglas Creek area are thyme buckwheat (Eriogonum thymoides), hedgehog-cactus (Pediocactus simpsonii), also reported in the 1978 survey, and Thompson's paintbrush (Castilleja thompsonii). Thyme buckwheat was found in abundance on ridges and mesa tops. Hedgehog cactus was often associated with thyme buckwheat but was not as frequent, usually occurring at the higher elevations. Thompson's paintbrush was found in similar habitat as in the Horse Heaven Hills.

The Federal Register (1975) lists Eriogonum thymoides as proposed threatened as does the Smithsonian report of 1975. The Suspected Rare, Endangered or Threatened Plants of Oregon and Washington (1979) lists Eriogonum thymoides and Pediocactus simpsonii, status undetermined. The Working List of Rare, Endangered, Threatened and Endemic Vascular Plant Taxa for Washington (1978) lists all three, status undetermined.

In addition, a single plant of coyote tobacco (Nicotiana attenuata), an intriguing plant of ethnological significance, was found in Sutherland Creek drainage bottom. This once widespread plant has only been reported once in Washington State since 1915 and current plans are being initiated to include this species on the Washington state list in the future.

No rare or endangered plants were encountered in Rock Island Creek.

For more information on these rare plants, see pages 13, 56, and 59. A plant list for the Douglas County can be found on pages 60 - 70.

One of the more interesting finds of the 1979 summer field season was the basalt daisy (Erigeron basalticus). This species was identified in the Yakima River Canyon. This plant is found in the Federal Register (1975, 1976), the Smithsonian Report (1975, 1978), the Suspected Rare, Endangered, or Threatened Plants of Oregon and Washington (1979) and A Working List of Rare, Endangered, Threatened and Endemic Vascular Taxa for Washington (1978), (proposed endangered on all lists). The colony of perhaps 50-100 plants is established on a north-facing vertical basalt wall extending for approximately 100 meters and located just off of the Yakima River. Soils are probably derived from wind deposits that have become wedged in the small crevices and ledges on the precipitous walls. No other plants appear to be associated with it.

Another colony of less vigorous "basalt daisies" was found on the other side of the Yakima River just off of public lands. However, these plants appear to be withered, possibly as a result of either drought (this colony is established on a south-facing slope high off the river) or grasshopper infestations.

Two proposed timber sale sites were investigated for possible rare plants. Environmental Assessments (EA's) were written on the sale areas (the reports are on file in the Spokane Office). In the proposed Granite Mountain timber sale area fairy-slipper (Calypso bulbosa) was found in a mixed conifer typed. A single plant was sighted. This species is currently on the Suspected Rare, Endangered, Threatened and Endemic Vascular Plant Taxa for Washington (1978). However, because of a relatively large distribution of this species, it is planned to be dropped.

Another mixed conifer type, Lone Ranch timber sale was also investigated. Deer paintbrush (Castilleja cervina) listed on the Working List of Rare, Endangered, Threatened and Endemic Vascular Plant Taxa for Washington (1978) (status unknown) was recorded on one section of the sale site. It is associated with Physocarpus - Festuca type on south and south-west facing slopes. Clematis columbiana was also found but is most likely going to be delisted due to its widespread occurrence.

Reconnaissance trips to Split-off Mountain and Ruby Mountain timber sale sites were made in the fall but most species were in an unidentifiable phenological state.

A partial list of all of these timber sale sites can be found on pages 60 - 70, (Ferry County) and the Ruby Mountain list is with the Okanogan County list on the same pages.

A couple of days were spent inventorying a proposed land exchange site east of Tonasket, Washington, in Okanogan County. A big sagebrush community dominated most of the landscape with small basalt bluffs occurring sporadically on both pieces of land. Here, the delicate "spinescens fameflower" (Talinum spinescens) was found established in small numbers on these bluffs.

Deer paintbrush (Castilleja cervina) was found on both pieces in the big-sagebrush-bunchgrass community in sparse numbers. The Suspected Rare, Endangered or Threatened Plants of Oregon and Washington (1979) and A Working List of Rare, Endangered, Threatened and Endemic Vascular Plant Taxa for Washington (1978) list Talinum spinescens (status undetermined) and Castilleja cervina is listed on the latter list (status undetermined).

Two weeks were spent inventorying the Chopaka Mountain region of northern Okanogan County. This is an area characterized by steep rugged slopes, large glacial lakes, and broad U-shaped valleys. Elevations range from 1200 feet at the floor of the Sinlahekin Valley to 7882 at the summit of Mt. Chopaka. The surveyed area ranged from 1200 feet to 3200 feet.

No rare, endangered, or threatened plants were found during the inventory of the area. For a partial plants list of the area, refer to pages 60 - 70, Okanogan County, of this report.

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Natural Vegetation of Oregon and Washington, U.S.D.A. For. Ser. Gen. Tech. Rep. PNW-8. Pac. NW For. and Range Exp. Sta. Portland, OR. 417 pp.
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- Rickard, W. H. et. al, 1978  
Balsamorhiza rosea and Eriogonium thymoides in Benton County, Washington, 1976, *NW Sci* 52(2); 110-118
- St. John, Harold and W. D. Courtney, 1924  
The Flora of Epsom Lake, *Am. J. of Bot.* Vol XI.
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In-house files of Rare, Endangered, Threatened, and Endemic Vascular Plant Taxa of Washington. Bldg. 17, Airdustrial Way, Olympia, WA 98504
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The Birds and Mammals of the Juniper Forest. A Study of Their Ecology and Distribution, M. S. Thesis, U. of Idaho, Moscow, ID.

COMPOSITAE (Sunflower Family)

Balsamorhiza rosea Nels and Macbr (rosy balsamroot)

- A. Status: Candidate Threatened of Federal Register 1975; Threatened Smithsonian List 1978.  
Listed on Department of Natural Resources Rare and Endangered Plant Species Task Force Working List 1977.
- B. Description: Perennial with a simple root crown surmounting the some-what carrot-like taproot; leaves petiolate, the blade deltoid, crenate to pinnatifid, 3--20 cm long, 1-10 cm wide, strigose, reticulate; stems 0.6-3 dm tall; heads relatively small, the rays 1-2.5 cm long, sometimes over 1 cm broad, commonly 10-16, sometimes 21, becoming roseate in age; achenes strigose (Hitchcock et al, 1955. p. 104).
- C. Distribution

I. Herbarium Records

Benton County

Rattlesnake Mountain, SE facing ridge. Near gravel pit in stony silt loam. Agropyron/Poa lithosolic association.  
4/10/71 Joan and Thomas O'Farrell 71-16  
WSU

Rattlesnake Hills, top of Jump-Off Joe Butte-television-telephone relay station. SW of Kennewick, E end of Horseheaven Hills.  
4/1926 Ruth L. Bennett  
WSU

On top of Jump-Off Joe Butte, elevation 2196 feet, dry and stony.  
4/30/1969 R. Campbell  
WALA

Top of Umtanum Ridge, rocky, gravelly.  
1978 R. Sauer 1979

Top of Rattlesnake Mtn., rocky, gravelly, with Sitanion hystrix.  
1978 R. Sauer 1979

Kittitas County

Nineteen miles east of Ellensburg, Hwy 10, towards Vantage, Dry Ridge.  
5-10-1975 I. Creso  
PLU

Kittitas County (Cont.)

Top of Badger Mtn. on rocky, gravelly soil.  
1978 R. Sauer 1979.

Spokane County

Dry gravel slope, Seven-Mile, 2300 feet altitude.  
5/6/39 F. C. Raney

Walla Walla County

Bare, windswept southwest slope, summit of ridge, elevation 1100 feet, southwest of Warm Spring Canyon, four miles southwest of Touchet, Wallula quad.  
5/10/43 W. A. Weber 2620  
WSU

Touchet Hills southwest of Walla Walla River, ca. six miles southwest of Touchet.  
4/7/44 Ernest Booth  
WSU

Yakima County

Type specimen thin sandy soil. Ridges of Rattlesnake Mts. Near Ward Gap; to get there, take State Highway 22, west of Prosser several miles and turn south on Ward Gap Road. The plants are on the first knoll east of the gap.  
5/1920 J. S. Cotton 568 (SE corner of Yakima County).

Thin rocky soil, ridges of Rattlesnake Mts.  
5/8/02 Cotton 568  
WSU

? County

Near Saddle Mtn., 29 miles from Ellensburg along Hwy 410  
5/14/1960 L. Russel  
PLU

- II. Range: Past - Known from the Rattlesnake Mtns. of Yakima and Benton Counties.

Present - Centered in Benton County, known from Rattlesnake Hills, Jump-Off Joe, Horse Heaven Hills, Badger Mtn., and Red Mtn. (Rickard et al., 1978).

- III. Location (BLM Administered) - Benton County, Horse Heaven Hills.  
T. 9 N., R. 27 E., Sec. 32, T. 9 N., R. 26 E., Sec. 22, 23, 24 & 25.

- D. Habitat - Balsamorhiza rosea grows on rocky ridgetops from 335 to 1092 meters. The community is generally dominated by Poa sandbergii while other species which vary in occurrence include Eriogonum niveum, E. sphaerocephalum, E. douglasii, E. compositum, E. thymoides, E. microthecum, Artemisia rigida, Haplopappus stenophyllus, Phlox hoodii, Agropyron spicatum, Lupinus sulfureus, Arenaria dimorpha, Lomatium gormanii, and Bromus tectorum (Franklin and Dyrness, 1973; Rickard et al., 1978). The soil is characteristically a lithosol type and is often covered with a crust of mosses and lichens. The environment is harsh and extreme, with heat and drought in the summer and intense frost action in the winter (Franklin and Dyrness, 1973). The sites vary from level ground to steep slopes of all aspects.
- E. Vegetational Type - BLM - Eriogonum sphaerocephalum Lomatium spp. Poa secunda association.
- F. Population Biology - Approximately 10 populations are known. Locally abundant. Flowering occurs from April to May.

Rickard et al., (1978) indicates that agriculture has probably had little effect on the population of B. rosea because the soil is unsuitable for cultivation. However, the effect of drift from aerially applied chemical herbicides has not been examined. Also, the habitat of B. rosea has been encroached upon by the development of radio and television communication towers and populations have been substantially reduced.

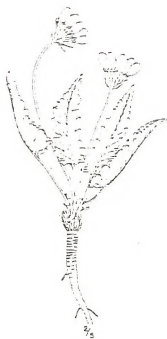
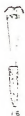
- G. Tolerance to disturbance: Due to the poor site in which it occurs disturbance from grazing is expected to be minimal. Off-road vehicle use, agriculture, or development of the land would be detrimental to populations.
- H. Hazards: Limited populations of this species make disturbance to the species critical to the continued survival of the species.
- I. Remarks and Recommendations: This species was common, tending to dominate the isolated communities where found. Horse Heaven Hills may be an area where this species is most abundant (Natural Heritage Program) and therefore, highly important to its survival.

It is recommended that no land development be allowed that would alter existing populations, their habitat, or similar adjacent habitat. If light grazing occurs in the area, an enclosure, to study the long term effect of grazing, is suggested. Further search for other populations is needed in Benton County. Population densities need to be determined and monitored through future years to determine land use impacts for future planning.

- J. Other: See distribution map, floral diagram.



Acknowledgements: Description, floral diagram from Hitchcock et al.  
Range habitat, population biology, courtesy of the Status Report compiled  
by John A. Kennison and Ron J. Taylor, Western Washington University.  
Herbarium records compiled by Washington Natural Heritage Program.



*S. rosea*



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

EXAMINER P. Camp

PLANT TAXON FIELD DATA REPORT

DATE \_\_\_\_\_

AERIAL PHOTO NO. \_\_\_\_\_

State: <u>Washington</u>		County: <u>Benton</u>		District: <u>Spokane</u>		Land Status: <u>BLM</u>	
Resource Area Name & No.				Planning Unit Name & No.		Allot. Name & No.	
Township	Range	Section	1/4 Section	FAMILY NAME :			
<u>T. 9 N.</u>	<u>R. 27 E.</u>	<u>3 2</u>	<u>N W 1/4 S E 1/4</u>	<u>Asteraceae</u>			

Scientific Name: Balsamorhiza rosea Nels and Macbr Common Name: rosy balsamroot

Site where observed: \_\_\_\_\_  
(Be specific - at or near, map location on back) Common in the one site where  
it was observed. \_\_\_\_\_

Occurrence: \_\_\_\_\_  
(locally abundant, scarce\*) \_\_\_\_\_ locally common \_\_\_\_\_ No. of sites in Dist. \_\_\_\_\_

Population size or dimension: 1/2 acre

Species condition: \_\_\_\_\_  
(vigorous, stable, threatened) stable

Threat to species or site: \_\_\_\_\_  
(evidence of construction, disease or other influences) none noticed in that

Specific site. \_\_\_\_\_

Flowering: Yes \_\_\_\_\_ No X Collection: \_\_\_\_\_ No \_\_\_\_\_ Photo: (size) \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_

General Comments: Found on a shallow soiled basaltic outcrop just below the top  
of the 1,745 ft. hill. Past bloom when recorded 6-7-79.

Status: State list \_\_\_\_\_ Tolerance to Disturbance: \_\_\_\_\_  
(Federal, State, other) Federal Register 1975 (threatened) Smithsonian Rept. 1975-78

Major vegetative type: Eriogonum spp - Balsamorhiza rosea

Associated species: (three most abundant) Eriogonum sphaeracephalum, Lomatium spp.

Other species present: Erigeron sp Astragalus purshii

Slope % 30 Exposure So. Elevation 1,700 Precip. \_\_\_\_\_ Soil Type \_\_\_\_\_

Management or use: (past & present, if known) \_\_\_\_\_

& Records consulted: Washington Natural Heritage program information

Persons consulted: \_\_\_\_\_

Physical inspection of the site: \_\_\_\_\_

(time spent & method used) ocular recon.

\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very  
tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites;  
3. Never found on disturbed sites.

Legend:



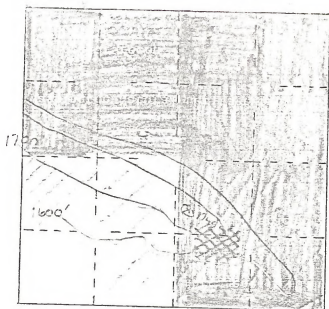
BLM owned lands



Not owned by BLM



Area *Balsamorhiza*  
*rosea* was seen



Horse Heaven Hills

Benton County.

Scale:

T. 9 N., R. 27 E.

Sec. 32

Remarks:

SCROPHULARIACEAE

Castilleja cervina Greenm (deer paintbrush)

- A. Status: Working List of Rare, Endangered, Threatened Vascular Plant  
Taxa for Washington. 1978 Status undetermined.
- B. Description: Perennial; stems clustered, erect, usually branched above,  
3-6 dm. tall, crisp-puberulent or glabrous, sometimes purplish; leaves  
crisp-puberulent (rarely glabrous), lower ones linear, entire, upper  
ones usually with a pair of linear, divaricate lobes; bracts broader  
than the leaves, 3-5 parted, crisp-puberulent, yellowish; flowers rather  
remote and not hidden by the bracts; calyx 15-20 mm. long, more deeply  
cleft below than above, its primary lobes again divided 2-3 mm. into 2  
slender, acute segments; corolla 18-25 mm. long, usually exserted from  
the calyx, not strongly curved, its lower lip reduced, 1/2-1/4 the  
length of the galea, with puberulent lobes (Hitchcock et al., 1959).
- C. Distribution:

I. Herbarium Records

Washington

Ferry County

Three miles north of Kettle Falls on the west side of the  
Columbia River #9466. June 21, 1953.

J. A. Calder, DBO  
Savile

15 miles east of Nespelen, under Douglas Fir.  
C. L. Hitchcock #17558. June 21, 1948.

Mountain meadow south of Republic,  
June 17, 1935. J. W. Tompson 11,688.

Okanogan County

In gravelly swales along the Sinlahekin Creek ADE  
Elmex #569, August 1897.

Mutton Ridge, 6000 feet. Chas. B. Fiber #358, July 24, 1931.

South side of Mt. Chopaka in rich meadow, 4500 feet.  
ADE Elmex #593. 1897.

South west of Havillah with Artemisia tripartita and Festuca  
idahoensis. June 18, 1961. R. Daubenmire #6179.

Five miles north of Malott. Virgin Purshia-Festuca idahoensis  
stand. June 24, 1965.



Okanogan County (Cont.)

Desautel Pass. June 22, 1974 (St. Martins College Herbarium).  
C. A. Bair #8949. Omak Lake, southeast 7.5 miles.

In open sagebrush - Stipa-Salvia association, 6 miles northwest  
of Omak on the road to Conconully.  
A. R. Kruckeberg 5585. June 13, 1963.

In scabland among sagebrush. Omak, May 29, 1932.  
C. B. Fiker #744.

Moist meadow near Wauconda summit, 3500 feet.  
J. W. Thompson 8629.

Okanogan National Forest. Exposed, open. Summit of Muckamuck  
lookout, 63,500 feet. June 1931.

Lower grass-forb slopes of yellow pine-Douglas fir forested  
habitat. Eight miles north of Conconully on the road to Loomis.  
Sinlahekin Game Range.  
A. R. Kruckeberg #5592. June 14, 1963.

In open sagebrush-bitterbush slopes, just east of Malott,  
Okanogan Valley. June 13, 1963. A. R. Kruckeberg, 5589.

Growing among Artemesia tridentata, rocky, 5000-6000 feet by  
Barnhard Trail, Chelan N.F. June 17, 1932. C. B. Fiker 1008.

Five miles north of Malott. R. Daubenmire, June 1965.

Low, damp meadow between Tonasket and Republic. June 29, 1931.  
J. W. Thompson 7118.

Spokane County

Sandy loam in opening in pine forest 2900-3100 feet. Mt.  
Spokane, Mt. Carlton August 16, 1931. Francis W. Pennell  
#15863.

Stevens County

Columbia River valley. Nearly level, sandy alluvial soil, open  
prairie. Northport 1400 feet.  
Geo. G. Hedgecock. June 7, 1933.

South slope hillside, edge of field, Onion Creek, Northport,  
1400 feet. Geo. G. Hedgecock. June 6, 1933.

Stevens County (Cont.)

Hills south of Kettle Falls. Not common. R. Kent Beattie, Ronald Chapman #2224. June 30, 1902.

Grassy openings on southwest slopes of Flagstaff Mountain. 4200 feet. Monita Engvall #171. July 6, 1958.

Bull Hill, seven miles southwest of Northport, southeast slope, black loamy soil, open forest 2800 feet. Geo. G. Hedgecock. July 14, 1933.

U. S. Colville National Forest. First Thought Mountain. July 1916. W. W. Eggleston 13159.

Montana

Madison County, Montana. Beaverhead Forest. Lewis Creek River. 6125 NE. July 16, 1959. Pete Stickney #273.

British Columbia

Copper Mtn. Eight miles southwest of Nelson. Occasional on open south-facing, rocky slopes 6500 feet, flowers greenish. J. A. Calder. July 26, 1953 #11062.  
DBO Savile

Mile 7.5 on the highway from Cascade to Rossland three miles east of Cascade, 3200 feet. Locally common in cut-over woods. J. A. Calder, DBO Savile #9538. June 22, 1953.

Along trail to Ashnola Range. South east facing slope around 5500 feet. Common. August 1956. J. A. Calder, J. A. Parneil, R. L. Taylor #19553.

Three miles west of Lillian Lake on Toby Creek road. Rocky mountain trench. Common on open coniferous bench above creek. R. L. Taylor, D. H. Ferguson #1611. June 15, 1958.

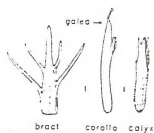
Fort Steele, W. B. Anderson #6230. June 23, 1922.

- II. Range: Southern British Columbia, northern Idaho, and northern Washington. To be expected in western Montana. Hitchcock et al, 1959

III. Location (BLM-administered): Ferry County, T. 39 N., R. 34 E., Sec. 5. Okanogan County, T. 37 N., R. 27 E., Sec. 35 and Sec. 22.

- D. Habitat: Grasslands and open coniferous woods. Mostly south, south-east, and southwest slopes, 1400-6100 feet.
- E. Vegetation Types: Associated with Artemisia-Festuca idahoensis, Physocarpus-Festuca idahoensis and grassland meadow types, sandy to sandy loam soils.
- F. Population Biology: Flowering May 15-August 15. Population trends not known. Appears to have a limited distribution.
- G. Tolerance to Disturbance: Appears to be sensitive to invader species of plants. Water availability also appears to be important, as it was not seen on drier sites within its habitat.
- H. Remarks and Recommendations: Light grazing appears to have no adverse effect as long as water availability is not seriously limited or invader species allowed to establish. A total distribution search is desirable to document its status and population trend for future management decisions and possible Federal listing. Any projects that would alter the habitat this species is found in would be detrimental to the species.
- I. Other: See floral diagram, distribution map.

Acknowledgements - Floral diagram and description from Hitchcock et al.



Castilleja cervina



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

EXAMINER P. Camp

PLANT TAXON FIELD DATA REPORT

DATE \_\_\_\_\_

AERIAL PHOTO NO. \_\_\_\_\_

State:		County:		District:		Land Status:	
Resource Area Name & No.				Planning Unit Name & No.		Allot. Name & No.	
Township	Range	Section	Section	FAMILY NAME :			
<u>3 9 N.</u>	<u>3 4 E.</u>	<u>0 5</u>	<u>1/4 NW 1/4</u>	<u>Scrophulariaceae</u>			

Scientific Name: Castilleja cervina Greenm Common Name: Deer paintbrush  
Site where observed: \_\_\_\_\_  
(Be specific - at or near, map location on back) See attachment

Occurrence: \_\_\_\_\_  
(locally abundant, scarce\*) uncommon - 3 No. of sites in Dist. \_\_\_\_\_

Population size or dimension: Scattered sporadically throughout area 50 plants  
Species condition: \_\_\_\_\_  
(vigorous, stable, threatened) Stable  
Threat to species or site: \_\_\_\_\_  
(evidence of construction, disease or other influences) Not observed on disturbed

sites or with disturbance species.

Flowering: Yes X No \_\_\_\_\_ Collection: yes Photo: (size) No Date: \_\_\_\_\_

General Comments: Appears to be very sensitive to disturbance as evidenced by its  
lack in area of the right vegetative type and slope, but increases and invaders  
were present .

Status: On a working list of Rare, Endangered, Threatened Tolerance to Disturbance: 3  
(Federal, State, other) and Endemic Vascular Plant Taxa for Washington (1978).

Major vegetative type: Symphoricarpos - Festuca idahoensis assoc.

Associated species: (three most abundant) Festuca idahoensis Symphoricarpos

Other species present: Physocarpus (occasionally)  
Slope % 5-40 Exposure SW-W Elevation 2600-3000 Precip. \_\_\_\_\_ Soil Type \_\_\_\_\_  
Management or use: (past & present, if known) Purposed timber sale area, grazed.

& Records consulted: Pullman Herbarium, Washington Natural Heritage Foundation  
Persons consulted: U.S. Fish and Wildlife Service - Portland, Joy Mastroguiseppe  
Physical inspection of the site: \_\_\_\_\_  
(time spent & method used) 4 days of hiking the Lone Ranch T.S. proposed area.  
\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very  
tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites;  
3. Never found on disturbed sites.



SCROPHULARIACEAE (Figwort Family)

Castilleja thompsonii Pennell (Thompson's paintbrush)

- A. Status: On A Working List of Rare, Endangered, Threatened, and Endemic Vascular Plant Taxa for Washington, 1978.
- B. Description: Perennial; stems clustered, erect or ascending, often branched above, 1-4 dm. tall, hispid or villous, sometimes purplish; lower leaves linear, entire, upper ones with 1-2 pairs of linear, divergent lobes, hispid or villous and sometimes glandular; bracts broader than the leaves, 3 to 5 parted, puberulent and ciliate, yellowish; calyx often purplish, 12-25 mm. long, deeply and subequally cleft above and below, its primary divisions usually again divided into 2, triangular or linear, acute segments 1-3 mm. long, occasionally merely notched or the segments obtuse; galea included in the calyx or little exerted, its lower lip prominent, scarcely pouched, usually not or obscurely puberulent, 2/3-4/5 the length of the galea (Hitchcock et al., 1959).
- C. Distribution

I. Herbarium Records

Washington

Adams County

Near Othello, May 1962

C. Abair 307-1

Benton County

Gravelly soil, Prosser, May 1900

J. S. Cotton 1032

Chelan County

Wet meadows and hillsides, head of Falls Creek. North side of Lake Chelan, 6000 feet.

Wenatchee Forest. Ward 14. July 26, 1942.

Kittitas County

Wenatchee Mountains, 5300 feet. July 4, 1903.

Cotton 1293.

Ellensburg. May 20, 1877, Piper 2703

Rt. 131. C. Abair 7658 May 4, 1973.

Fish Lake GS, around 11 miles north of Salmon Lake.

Spellenberg 1501 July 13, 1966.

Lincoln County

Crab Creek, W. N. Suksdorf June 12, 1884

Spokane County

Dry slopes. Henderson 2266-9. 1892.

In gravelly ground prairie, just northwest of city limits of Spokane. May 5, 1934. Milburge 879.

Yakima County

Yakima River. W. N. Suksdorf. June 7, 1884.

Dry, stony places. Flett 1188. May 31, 1899.

Clover Springs, Elevation  $\pm$  6500 feet. West side of ridge, common on dry open slope.  
Stevens 1773. August 5, 1973.

Meeks Table Research Natural Area.

Tiedeman et al., 1977 publ. Collected May 8, 1975.

British Columbia

Eastern slopes and open hillsides. Yellow pine belt 763.  
June 1964.

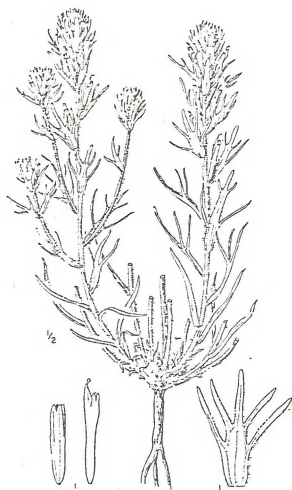
- II. Range: Widespread in the arid interior of Washington and southern British Columbia.
- III. Location (BLM Administered): Yakima County, T. 13 N., R. 19 E., Sec. 4. Douglas County, T. 23 N., R. 23 E., Sec. 25. Benton County, T. 8 N., R. 27 E., Sec. 5, and T. 9 N., R. 27 E., Sec. 32.
- D. Habitat: Dry soils, frequently associated with sagebrush. Local on open slopes and bald summit to about 7000 feet. Noted on north, southeast, northeast, and east aspects.
- E. Vegetation Type: Artemisia tridentata - Agropyron spicatum association.
- F. Population Biology: Flowers May-July. Not in great numbers, but widespread.
- G. Tolerance to Disturbance: Appears to be sensitive to community disturbance as it was not noted where Bromus tectorum or other invasion species were established in any significant numbers.

H. Hazards: Sensitive to heavy grazing or agriculture.

I. Remarks and Recommendations: Not abundant, but widespread. Any project that would alter the existing habitat would endanger present populations. Levels of grazing, at which Bromus tectorum and other undesirable species do not increase, probably won't endanger the populations.

J. Other: See distribution map, and floral diagram.

Acknowledgements: Floral diagram and description from Hitchcock et al. 1959. Distribution information courtesy of Washington Natural Heritage Program.



*C. thompsonii*



Castilleja thompsonii

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PLANT TAXON FIELD DATA REPORT

EXAMINER P. Camp

DATE 6-27-79

AERIAL PHOTO NO. \_\_\_\_\_

State: <u>Washington</u>		County: <u>Yak. Dougl. Ben</u>		District: <u>Spokane</u>		Land Status: <u>BLM</u>			
Resource Area			Planning Unit			Allot.			
Name & No.			Name & No.			Name & No.			
Township		Range		Section		$\frac{1}{2}$ Section		FAMILY NAME :	
T. <u>13 N.</u>		R. <u>19 E</u>		<u>4</u>		<u>1/4</u>		<u>Scrophulariaceae</u>	
T. (See Back of Page)									

Scientific Name: Castilleja thompsonii Pennell Common Name: Thompson's paintbrush  
Site where observed: \_\_\_\_\_  
(Be specific - at or near, map location on back) found in the Artemisia tridentata -  
Agropyron spicatum association in areas of minimal disturbance.

Occurrence: \_\_\_\_\_  
(locally abundant, scarce\*) sporadic but common, not abundant

Population size or dimension: widespread

Species condition: \_\_\_\_\_

(vigorous, stable, threatened) Stable

Threat to species or site: \_\_\_\_\_

(evidence of construction, disease or other influences) appears sensitive to

community disturbance. It's not noted where Bromus tectorum or other invasion species

are evident.

Flowering: Yes ☒ No ☐ Collection: yes Photo: (size) no

General Comments: Noted growing around Big sage; some paintbrushes are known partial

parasites of big sage. Dates noted: 6-11-79 (Yakima Co.) withered, 5-1-79 (Douglas Co.)

5-16-79, 6-7-79 Benton Co., flowering.

Status: \_\_\_\_\_ Tolerance to Disturbance: \_\_\_\_\_

(Federal, State, other) State list (Washington Natural Heritage, 1978.

Major vegetative type: Noted on N., SE, NE, E aspect

Associated species: (three most abundant) Artemisia tridentata, Agropyron spicatum

Other species present: Eriogonum thymoides (Douglas Co.) Balsamorhiza sp.

Slope % 5-40 Exposure Elevation 1400-2800 Precip. \_\_\_\_\_ Soil Type \_\_\_\_\_

Management or use: (past & present, if known) \_\_\_\_\_

Date & Records consulted: WSU Herbarium, Washington Natural Heritage Program info.

Persons consulted: Joy Mastrogiuseppe, WSU Herbarium

Physical inspection of the site: \_\_\_\_\_

(time spent & method used) Ocular recon.

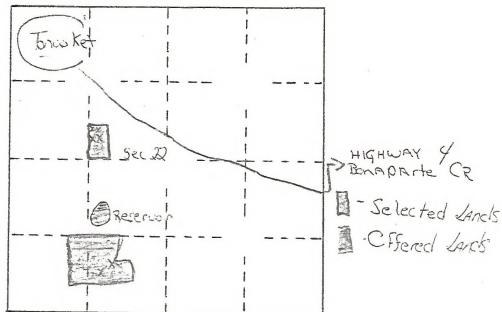
\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very

tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites:

3. Never found on disturbed sites.



Legend:



Scale:

Remarks:

T. & R. Continued

T. 23 N., R. 23 E. Sec. 25

N., R. 27 E., Sec. 5

N., R. 27 E., Sec. 32

COMPOSITAE (Sunflower Family)

Erigeron basalticus Hoover (basalt daisy)

- A. Status: Proposed endangered on the Federal Register, 1976; Endangered Smithsonian list 1978; Dept. of Natural Resources - Rare and Endangered Plant Species Task Force Working List, 1977.
- B. Description: Stems several from a perennial taproot, sprawling or pendent, branched, leafy, especially near the tip; herbage spreading-hirsute and finely glandular; leaves cuneate to obovate, up to 4 cm long and 1.5 cm wide, more or less deeply and irregularly trilobed, the lobes broad, often lobed again; heads terminating the branches, the disk about 8-12 mm wide, involucre 5-6 mm high, rays usually 25-30, pink or pink-purple, 5-7 mm long and 1.5 mm wide, disk corollas 3-4 mm long, pappus usually of 10-15 bristles (Hitchcock et al., 1955).
- C. Distribution:

I. Herbarium Records

Yakima County

Basalt ledges around north entrance to the highway tunnel north of Yakima going toward Ellensburg.  
6/1951 J.W. Thompson 144836  
WTU

Crevices of basalt cliffs, forming loose mats, Yakima River canyon near Pomona, 1400 feet.  
6/20/51 Ripley 10852  
WTU

Lower "Ellensburg Canyon" at west base of Selah Butte  
10/1942 Hoover 6021  
WTU USNH, uc

Selah Creek  
10/1942 Hoover 5983

Crevices of lava columns of the tunnel in the Yakima Canyon about 10 miles west of Yakima.  
8/1953 J. W. Thompson 17411  
WTU

North facing basalt cliffs above dry bed of Selah Creek, south end of Yakima Canyon, near Pomona  
5/1950 Witt, J. G.  
WSU

Yakima County (Cont.)

Crevices of basalt cliffs, forming loose mats, Yakima River Canyon near Pomona. Stems fragile, rays white, rarely lilac.  
6/1951 A. D. Ripley and R. C. Barneby  
WSU WMH

Canyon Tunnel, Shade, Rocky  
8/68 Nielson T. C. 632  
YRL

Roadside Yakima Canyon road south entrance of tunnel on old road  
9/1977 P. Hager

- II. Literature Report: Hoover, R. F. 1944. Three New Species from the State of Washington. Leaflet. West. Bot. 4:38-41.
- III. Range: Cliff crevices in rocky canyons; Selah Creek and vicinity, Yakima County, Washington. Very localized (Hitchcock et al., 1955).
- IV. Location (BLM-administered): T. 14 N., R. 19 E., Sec. 4, Yakima County, along west side of the Yakima River about 1 1/2 miles north of the Selah Creek tributary.
- D. Habitat: Grows in rock crevices on steep basaltic cliffs, on slopes of various aspects, and at altitudes from 365 to 485 m.
- E. Vegetation Type: Basalt cliffs, most often in the absence of other vascular plants.
- F. Population Biology: Flowering from May to October. About 100 plants were located on BLM lands. Population trends unknown, but the early collection data of Hoover (1944) indicate this species may have been more extensive 30 years ago.
- G. Tolerance to Disturbance: Due to the nature of its habitat, there are no apparent threats to survival of the species.
- H. Hazards: The grasshopper infestation this year (1979) appeared to have adversely affected some known populations.
- I. Remarks and Recommendations: The population of Erigeron basalticus was one of the healthiest populations sited and measures should be taken to protect the cliff and population. Due to the nature of its habitat, grazing and off-road vehicle use won't affect populations. Any projects significantly altering moisture may be detrimental.
- J. Other - See attached distribution map and floral diagram.

Acknowledgements - Description and floral diagram from Hitchcock et al.  
Distribution information courtesy of the Washington Natural Heritage Program.



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*E. basalticus*



*Erigeron basalticus*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

EXAMINER Gary Horn

PLANT TAXON FIELD DATA REPORT

DATE June 27, 1979

Pomona, WA. Quad  
AERIAL PHOTO NO. \_\_\_\_\_

State: <u>Washington</u>	County: <u>Yakima</u>	District: _____	Land Status: <u>BLM</u>
Resource Area		Planning Unit <u>Yakima-Klickitat Allot.</u>	
Name & No. <u>Yakima 3</u>	Name & No. Planning Area <u>04</u> Name & No. <u>Robert 0803</u>		
Township	Range	Section	FAMILY NAME :
<u>1 4 N</u>	<u>1 9 E</u>	<u>0 4</u>	<u>Asteraceae</u>

Scientific Name: Erigeron basalticus Hoover Common Name: Basalt daisy

Site where observed: \_\_\_\_\_  
(Be specific - at or near, map location on back) Along Yakima River on west side, approxi-  
mately 3 miles north of Pomona (Yakima County) about 1 1/2 miles north of Selah tributary.

Occurrence: \_\_\_\_\_  
(locally abundant, scarce\*) Locally abundant within a limited range.

Population size or dimension: Approximately 100 mts of basalt cliff

Species condition: \_\_\_\_\_  
(vigorous, stable, threatened) Stable

Threat to species or site: \_\_\_\_\_  
(evidence of construction, disease or other influences) There are no apparent threats to  
survival of the taxon as it generally grows on steep cliffs. Any development of  
roads or railways with disturbance of the associated cliffs where the taxon exists  
could seriously threaten the species survival.

Flowering: Yes X No \_\_\_\_\_ Collection: No Photo: (size) 35 mm

General Comments: Approximately 100 plants were found on BLM-administered public lands  
(T. 14 N., R. 19 E., Sec. 4, SW 1/4 SE 1/4). This was the most vigorous community of this  
taxon found. Approximately 25 individuals were found in the adjacent Sec. 9 just north  
of the old tunnel. Plants at this site appeared threatened - many dried up members.

(Candidate Endangered F.R. July 1, 1975  
(Proposed Endangered F.R. June 16, 1975  
Status: (Endangered Smithsonian List 1978 Tolerance to Disturbance: \_\_\_\_\_  
(Federal, State, other) (Rare and Endangered Plant Species Task Force Working List 1977  
(Endangered-Oregon Rare and Endangered Plant Task Force List 1979

Major vegetative type: Basalt cliffs

Associated species: (three most abundant) \_\_\_\_\_ Taxon not associated with other species

Other species present: N/A

Slope % 100 Exposure ESE Elevation 1220' Precip. 10 Soil Type Very shallow

Management or use: (past & present, if known) \_\_\_\_\_

Data & Records consulted: Status reports compiled by J. Kennison and J. Taylor WWU

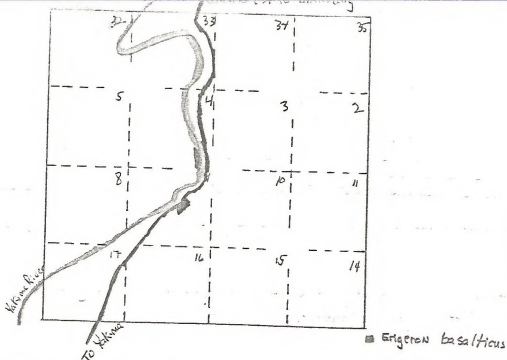
Persons consulted: Washington Natural Heritage Program

Physical inspection of the site: \_\_\_\_\_

(time spent & method used) Reconnaissance for rare and endangered plants - 2 days

\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very  
tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites;  
3. Never found on disturbed sites

Legend:



Scale:

Remarks:

Plants found in crevices on vertical basalt cliffs immediately adjacent to Yakima River. Cliffs well consolidated and shaded.

COMPOSITAE (Sunflower Family)

*Erigeron piperanus* Cronq (Piper's daisy)

- A. | Status: Proposed threatened on the 1975 Federal Register; proposed threatened on the 1975 Smithsonian Report; proposed threatened on the 1978 Smithsonian Report. Cited in the Washington State Department of Natural Resources Task Force Working List. Considered a Washington State endemic by the Washington Natural Heritage Program.
- B. Description: Slender perennial with a taproot and short branched caudex; stem 3-10 cm. high, seldom much exceeding the leaves, hirsute with mostly appressed or ascending hairs; leaves numerous, not all basal, linear or nearly so, lax and usually curved, up to 4 cm. long and 1.5 mm. wide, hispid-ciliate on the margins, especially below, and appressed-hairy on the surface, the lower with conspicuously enlarged, whitish-indurated base; heads solitary or few, small, the disk 5-10 mm. wide; involucre 3-5 mm. high, spreading-hirsute with long white hairs; rays 45-40, yellow, 4-9 mm. long, 1.0-1.8 mm. wide; disk corollas mostly 2.8-4.2 mm. long; pappus of 15-25 bristles and often some short outer setae. (Hitchcock et al, 1973).
- C. Distribution:

I. Herbarium Records

Benton County

Hover  
5/17/1917 Pickett 1053  
WTU

Gate 111 Road 2 miles southwest of gate. Eurotia/Poa  
association Warden silt loam, Alt. 800 feet.  
6/27/1971 Joan and Thomas O'Farrell 71-145  
WSU

Hover  
5/1917 S. M Vogel 1053  
WSU

In ARTR: AGSP community  
7/1978 Zintel Canyon Development 1978

Douglas County

Crab and Wilson Creeks 2,250 feet  
6/1893 J. H. Sandberg - J. B. Leiberger 233  
WSU USNH, uc



Franklin County

Gravelly hillside, Kahlotus.  
5/20/1903 J. S. Cotton 1009  
WSU USNH

Connell  
6/18/1897 A. B. Lechenby  
WSU

Pasco  
5/25/1899 Piper 2993  
WSU

Sagebrush prairies  
6/1916 B. F. Dana  
WSU

Pasco  
5/1896 H. H. Hindshaw  
WSU

Grant County

Jackass Mt.  
5/30/1936 Smith 790  
WTU DS

Sagebrush plains near Soap Lake, Grand Coulee  
5/30/1937 Thompson 13718  
WTU

Sandy sagebrush wastes west of Quincy toward Rock Island  
5/29/1953 Thompson 17300  
WTU

Soap Lake  
6/28/1902 E. MacKay 5  
USNH

Warden  
6/20/1967 C. Abair 3663-1  
STM

Amongst sagebrush, Soap Lake, Grand Coulee  
5/22/1937 W. J. Eyerdam 601A  
UC

Grant County (Cont.)

Iso-type specimen sagebrush slopes north of Soap Lake in Grand Coulee.

Erigeron curtifolius Piper

5/18/1935 Thompson 11490  
WSU

Dry sagebrush lands, high hill east of Soap Lake, Alt. 1,700 ft.  
6/27/1921 Harold St. John, W. D. Courtney, C. S. Parker 4993  
WSU

Sandy sagebrush wastes west of Quincy toward Rock Island  
5/29/1953 J. W. Thompson 17300  
WSU

Common on scabland prairie one-half mile south of the west end  
of O'Sullivan Dam.  
6/15/1950 S. W. Harris 65  
WSU

Soap Lake  
6//28/1902 Ernest MacKay 5  
WSU

Sagebrush plains near Quincy  
6/1953 J. W. Thompson 9081  
WSU

Burke Junction Artemisia tridentata Agropyron spicatum associa-  
tion colors of specimens when collected cream, yellow, lavender.  
6/1953 R. Daubenmire 53129  
WSU

Ephrata to Ritzville  
6/27/1902 D. Griffiths and J. S. Cotton 494  
WSU USNH

Long Lake reservoir site, widely scattered and very common; ray  
flowers yellow  
6/1/1951 M. X. Gaines, T. H. Scheffer  
WSU

Sandy sagebrush slopes near Quincy 6/15/1931 Thompson 6775  
WTU USNH ORE

Sagebrush plains near Quincy  
6/21/1933 Thompson 9081  
WTU

Grant County (Cont.)

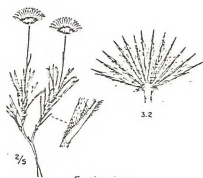
Sagebrush slopes north of Soap Lake in Grand Coulee.

5/18/1935 Thompson 11490

WTU

- II. Range: Dry open places, often among sagebrush. Columbia plains of south central and south east Washington.
- III. Location (BLM-administered): Benton County, Horse Heaven Hills T. 9 N., R. 27 E., Sec. 33; T. 9 N., R. 26 E., Sec. 25; T. 8 N., R. 28 E., Secs. 18 and 19.
- D. Habitat: Most common in virgin stands of Artemisia tridentata-Agropyron spicatum and also found on scabland. Also been noted with Eurotia lanata-Poa sandbergii association. Found in scabland.
- E. Vegetation Type: (BLM location) Agropyron spicatum. Townsendia florifer.
- F. Population Biology: Flowers, May-June. Populations found with only a few (5-10) individuals.
- G. Tolerance to disturbance: Not known, but most of the historic collections known from virgin stands of Artemisia tridentata-Agropyron spicatum associations.
- H. Hazards: Small populations (sited) intolerant of significant habitat alteration from grazing or other.
- I. Remarks and Recommendation: This species appears to be tied to the Kiona soil association. Soil maps in the range should be used for further searching of populations. Present and future land use should be evaluated and oriented to light grazing use before flowering and after seed is set. An enclosure is recommended to evaluate the long term effects of management on populations. Projects that would alter present habitat of the species would be detrimental to the species.
- J. Other: See attached distribution map-floral diagram.

Acknowledgements - Description and floral diagram from Hitchcock et al. Distribution and habitat information courtesy of the Washington Natural Heritage Program.



*E. piperianus*



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PLANT TAXON FIELD DATA REPORT

EXAMINER P. Camp

DATE May 12, 1979

AERIAL PHOTO NO. \_\_\_\_\_

State: <u>Washington</u>		County: <u>Benton</u>	District: <u>Spokane</u>	Land Status: <u>BLM</u>
Resource Area		Planning Unit		Allot.
Name & No.		Name & No.		Name & No.
Township	Range	Section	1/4 Section	FAMILY NAME :
<u>T. 9 N.</u>	<u>R. 27 E.</u>	<u>33</u>	<u>NW 1/4 SE 1/4</u>	<u>Compositae</u>

Scientific Name:

Erigeron piperanus Cronq.

Common Name:

Piper's daisy

Site where observed:

(Be specific - at or near, map location on back) On or near the ridge tops across

from Dennis Road.

Occurrence:

(locally abundant, scarce\*) Just a few scattered plants. No. of sites in Dist. \_\_\_\_\_

Population size or dimension: At the most 20 plants in a 1/4 mile distance

Species condition:

(vigorous, stable, threatened) Stable

Threat to species or site:

(evidence of construction, disease or other influences) Grazing may negatively impact

population. The plants observed were healthy.

Flowering: Yes X No \_\_\_\_\_ Collection: yes Photo: (size) 35MM Date: \_\_\_\_\_

General Comments: Didn't appear in similar habitat until the aspect was SE (from N)

May be an important factor. Currently it's listed on 1975 Federal Register (T) and the  
1975 and 1978 Smithsonian Report.

Status:

(Federal, State, other) see above

Tolerance to Disturbance: \_\_\_\_\_

Major vegetative type: Agropyron spicatum - Artemisia tridentata

Associated species: (three most abundant) Agropyron spicatum

Other species present: Townsendia florifer, Chaenactis douglasii

Slope % 30 Exposure SE Elevation 1200 Precip. \_\_\_\_\_ Soil Type \_\_\_\_\_

Management or use: (past & present, if known) grazing

& Records consulted: Natural Heritage Program, WSU Herbarium

ons consulted: Joy Mastrogioseppe, WSU herbarium

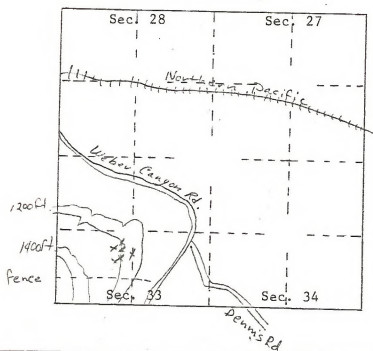
Physical inspection of the site:

(time spent & method used) Ocular Recon.

\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites; 3. Never found on disturbed sites.

Goose Hill  
X

Legend:



Scale:

Remarks:

POLYGANAEECEAE (Buckwheat Family)

Erigonum thymoides Benth (thyme buckwheat)

- A. Status: Proposed as threatened on the 1975 Federal Register.  
Proposed threatened on the 1975 and 1978 Smithsonian report. 1978  
Washington State Dept. of Natural Resources Task Force Working Unit.
- B. Description: An intricately branched, suffrutescent, low and spreading to erect shrub 5-15 (30) cm. tall, more or less grayish-tomentose to somewhat sericeous throughout; leaves many, usually matted, linear to linear-spatulate, 3-10 (15) mm. long, commonly revolute, mostly tomentose beneath but more nearly sericeous above; flowering stems (1) 3-8 (12) cm. tall, always with a whorl of leaves at or somewhat below mid-length; involucre single and terminal, turbinate, 3-5 mm. long, the teeth 6-8, erect, triangular, lanceolate, 1 (2) mm. long; perianth with a stipitate base 0.5-1 mm. long, densely retorse-hairy to semi-lanate, yellow (to white) or rose-red, 4-6 mm. long, the (5) 6 segments cuneate-obovate, more or less crisp-margined, often with a clawed base; flowers imperfect, the plants dioecious, the staminate flowers with 9 stamens arising at the edge of a distinct annular thickening, the ovary rudimentary, the filaments hairy only at the base; pistillate flowers with mere vestiges of stamens, the styles stout, spreading, 0.5-1 (1.5) mm. long; achene pubescent above.
- C. Distribution:

I. Herbarium Records

Douglas County

Open scabland ca 11 mi S of Waterville on Badger Mt., on very shallow red soil of basaltic origin, too shallow to support sagebrush.

6/18/1948 Hitchcock 17433  
WTU

Open sagebrush desert, 2 miles NW of Trinidad

5/24/1964 Hitchcock 23451  
WTU

Dry, sandy plain near Orondo

5/22/1966 Taylor 1098  
WWB

Growing on sandy gravelly soil. 21 miles south of Wenatchee above Columbia River (east side)

5/12/1963 Lane 671  
WWB



Douglas County (Cont.)

Dry sagebrush slope ca 20 miles west of Coulee City.

5/1959 Martin 4982

WWB

Dry, rocky slope overlooking Douglas Creek, ca midway between Palisades and Farmer.

5/9/1971 Taylor 3158

WWB

Dry, rocky sagebrush plain, 1 mile west of Douglas on Highway 2.

5/21/1966 Taylor 1074

WWB

Ten miles east of Rock Island in eastern Washington

4/27/1974 J. Foster

SPC

Rock Island

5/4/1970 C. Abair 4254

STM

Rocky south slope 2 miles west of Coulee City.

5/1/1940 Rogers 373

WTU

Alpine slopes of Badger Mt., elevation 5000 feet.

6/1/1940 J. W. Thompson 14665

WTU

Grant County

Common on hillside along old Wagontop Rd., Dry Falls Park, Grant Coulee.

5/9/1950 Gaines 248

WTU

Common and abundant on hillsides about Ephrata

5/2/1916 Pickett 454

WTU

Dry Falls Rocky slope.

5/14/1967 Fish

WWB

Eight miles west of Ephrata

4/1926 G. N. Jones 1175

WWB

Grant County (Cont.)

East side of Columbia River, about 4 miles south of Vantage Bridge. Rocky outcroppings north of Wanapum Dam. Growing with Salvia, Streptanthella, Erigeron, Chaenactis, Hackelia, Penstemon.

5/2/1969 Hacanson 143

CWU

Approximately 8 miles southwest of Quincy. Quincy-Soap Lakes region Potholes cataract.

4/1972 Masterson 13

CWU

Sagebrush slopes in Grand Coulee near Coulee City.

5/18/1935 J. W. Thompson 11513

USNH

Five miles west of Quincy

5/21/1967 R. C. Phillips

SPC

Dry Falls.

4/22/1972 C. Abair 6754

STM

Sagebrush slopes in Grand Coulee near Coulee City.

5/19/1935 J. W. Thompson 11466

WTU

Three miles south of Vantage on Highway 243.

5/4/1964 J. P. Taylor

CENT

1/4 mile east of Highway 236 on Highway 26.

6/5/1968 A. E. Grable 999.

WALA

Toward Columbia River Bridge at Vantage from Quincy Desert, hard, dry ground.

5/5/1929 L. Benson 1316

Okanogan County

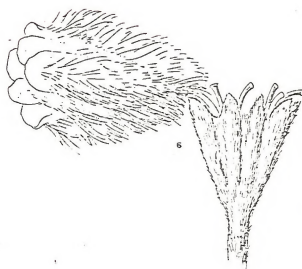
Ca. 5 miles north of Grand Coulee Dam.

5/30/1959 Martin 4804

WWB

- II. Range: Regional endemic in Idaho, Oregon, and Washington; Chelan County, Washington; south on the east side of the Cascades to northern Oregon; east to southwest Idaho.
- III. Location (BLM Administered): T. 13 N., R. 19 E., Sec. 4, Yakima County. T. 23 N., R. 23 E., Secs. 23, 25, Douglas County.
- D. Habitat: Sagebrush plains to open basalt ridges in the lower mountains.
- E. Vegetational Type (BLM locations): Basalt washes associated with Balsamorhiza hookeri, Artemisia rigida, Poa secunda.
- F. Population Biology: Numerous populations have been located throughout the scablands in central Washington; Flowers April-June.
- G. Tolerance to Disturbance: Appears to be fairly tolerant to grazing. Removal of habitat by agriculture or off-road-vehicle use detrimental.
- H. Hazards: Popular among rock garden plant collectors.
- I. Remarks and Recommendations: Recommended removed from the Federal list. Areas where this species occurs should be restricted from off-road-vehicle use, agriculture, and any habitat alteration project, including alteration of soil, moisture, and community structure, until more is known of its distribution.
- J. Other: See distribution map and floral diagram.

Acknowledgements: Distribution, range, and population biology courtesy of the Washington Natural Heritage Program. Description and floral diagram adapted from Hitchcock, et al.



*E. thymoides*



*Erigonum thymoides*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

EXAMINER P. Camp

PLANT TAXON FIELD DATA REPORT

DATE summer, 1979

AERIAL PHOTO NO. \_\_\_\_\_

State: <u>Washington</u>		County: <u>Douglas, Yak.</u>		District: _____		Land Status: <u>BLM</u>	
Resource Area		Planning Unit		Allot.			
Name & No.		Name & No.		Name & No.			
Township	Range	Section	1/4 Section	FAMILY NAME :			
<u>T. 13 N.</u>	<u>R. 19 E.</u>	<u>4</u>	<u>S 1/4 SE 1/4</u>				
<u>T. 23 N.</u>	<u>R. 23 E.</u>	<u>23, 25</u>	<u>1/4</u>	<u>Polygoneaceae</u>			

Scientific Name: Eriogonum thymoides Benth Common Name: thyme buckwheat

Site where observed: \_\_\_\_\_  
(Be specific—at or near, map location on back) shallowed soiled basaltic areas and  
basaltic leges (with some soil formation).

Occurrence: \_\_\_\_\_  
(locally abundant, scarce\*) common No. of sites in Dist. \_\_\_\_\_

Population size or dimension: not restricted to a specific site

Species condition: \_\_\_\_\_  
(vigorous, stable, threatened) vigorous

Threat to species or site: \_\_\_\_\_  
(evidence of construction, disease or other influences) none obvious

Flowering: Yes y No \_\_\_\_\_ Collection: yes Photo: (size) \_\_\_\_\_ Date: \_\_\_\_\_

General Comments: appeared to be occurring on or around the tops of slopes.

Status: Threatened Tolerance to Disturbance: \_\_\_\_\_  
(Federal, State, other) Federal Register 1975, Smithsonian Report 1975 State Lists  
Natural Heritage.  
Major vegetative type: So. SE slopes

Associated species: (three most abundant) Balsamorhiza hookeri, Artemisia rigida (Yak. Co.

Other species present: Pediocactus simpsonii (Dougl. Co.) Erigeron piperanus (Douglas Co.)

Slope % 5% Exposure \_\_\_\_\_ Elevation 15-2,100 Precip. \_\_\_\_\_ Soil Type \_\_\_\_\_

Management or use: (past & present, if known) \_\_\_\_\_

Herbaria & Records consulted: WSU herbarium, Washington Natural Heritage Program

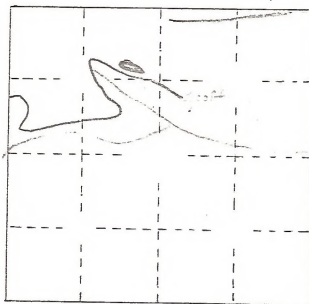
Persons consulted: Joy Mastrogioseppe WSU herbarium

Physical inspection of the site: \_\_\_\_\_  
(time spent & method used)

\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites; 3. Never found on disturbed sites.

Legend:

Intermittent  
Stream Bottom



Intermittent Stream  
Bottom

R. 23 E., T. 23 N.  
Sec. 23

Douglas County

Place collected  
probably throughout  
around the 2,100 ft.

Scale:

Remarks:

Sec. 23

Sec. 24

Sec. 26

Sec. 25

Douglas County

R. 23 E., T. 23 N.

SOLANACEAE (Potato Family)

Nicotiana attenuata Torr ex Wats (coyote tobacco)

- A. Status: Recommended for State listing as E/T. Too widespread in other states for Federal listing.
- B. Description: Glandular-pubescent, heavily odorous annual 3-10 dm. tall; leaves entire, the lowermost petiolate and with lance-ovate to elliptic blade 2.5-12 cm. long and 1-5 cm. wide, the others progressively reduced and relatively narrower upward; flowers more or less numerous in an elongate, subnaked, mixed panicle; calyx 5-toothed, the teeth triangular, unequal, the longer ones 2-4 mm. long, much shorter than the tube; corolla vespertinal, dirty white, salverform, (2)2.5-3.5 cm. long, the limb 8-14 mm. wide when expanded; capsule ovoid, 2-locular, 4 valved, about 1 cm. long, partly enclosed by the slightly accrescent calyx tube. N=12. Wild tobacco, coyote tobacco. (Hitchcock et al., 1959)

C. Distribution:

- I. Herbarium Records (from University of Washington and Washington State - Courtesy of Steve Gill)

Benton County

Rattlesnake Mts., 25.9.1901  
Cotton, J.S.  
Yakima Region

Chelan County

Wenatchee, 18.9.1900  
Whited, K.

Near Leavenworth, 20.8.1925  
June, Geo. N.  
Dry Ground

Wenatchee River near mouth of Chiwaukum Creek, 12.9.1921  
Otis, I. C.  
1700 feet

Entiat Valley, Sander's Canyon, 8.8.1933  
Morrill, G. E., 250  
Dry soil, elevation 1,000 feet

Douglas County

Wilson Creek, 27.6.1893  
Sandberg, J. H., and Leiberg, J.B.  
1300 feet.



Douglas County (Cont.)

Near Moses Coulee, 31.8.1892  
Lake and Hull

Wilson Creek, 6.1893  
Sandberg, J. H., and Leiberg, J. B.  
2000-3000 feet

Franklin County

Pasco, 12.6.1892  
Henderson, L. F.

Grant County

Coulee City, 21.6.1933  
Thompson, J. William 9102  
Base of talus in Grand Coulee near Coulee City

Kittitas County

Natches River, 1889  
Vasey, G. R.  
In or near Cascade Mountains

Chelan, or King Co., 1889  
Vasey, G. R.  
In or near the Cascade Mountains

Ginkgo Petrified Forest Park, Bok Springs  
Rye Grass Coulee, 19.6.1936  
Smith, Harold W.

Klickitat County

Bingen, 9 and 10.1894  
Suksdorf, W. N. 1494  
On sandy bottom land near Bingen

Bingen 10.11.1893  
Suksdorf, Wilhelm N.

Bingen 9 or 10.1894  
Suksdorf, W. N., 1482  
On sandy bottom land near Bingen

Yakima County

Moxee to North Yakima, 30.5.1902  
Griffiths, David, and Cotton, J. S.  
Eastern Washington

Yakima County (Cont.)

North Yakima, 8.1890(1895)  
Watt, Geo. H.

North Yakima, 1894  
Steinnrig, Mrs. W. L.

25 mi. SW of Toppenish, Status Creek at 4th U. S. 97 Bridge,  
3.9.1977  
Hunn, E., 770  
Altitude 490 M, habitat arid transition, riverine, gravelly  
wash, AWTpAMA

10 mi. S. of Toppenish on U.S. 97, 1977  
Hunn, E., 500

Altitude 350 M, habitat Upper Sonoran Riverine

Whitman County

Almota, 26.8.1894  
Piper, C. V.

Almota, 9.9.1896  
Piper, C. V.

Wawawai, 22.10.1901  
Beattie, R. Kent

Oregon

Oregon, eastern, 11.9.1908  
Cusick, Wm. C.  
Doubtless used by the Indians, common in low, warm valleys,  
Adventive along the R.R. right-of-way, at 3300 feet alt.  
Annotation: The Nicotiana multivalvus PH. and the var. N.  
quadrivalvus are not now to be found in the Columbia River Basin  
region (1912).

Oregon, Multnomah County, Portland, Hayden Island, 3.10.1915  
Gorman, M. W.  
Sand spits to sandy banks, rare here.

Oregon, Multnomah County, Portland, Hayden Island, 8.10.1921  
Nelson, J. C.  
Sandy shore of the Columbia River, on Hayden Island, opposite  
Vancouver, WA.

Oregon, Multnomah County, Hayden Island, 28.8.1915  
Nelson, J. C.  
Sand bar on Hayden Island, opposite Vancouver, WA.

Oregon (Cont.)

Oregon, Harney County, French Glen, 12.9.1953

Hansen, Charles G., 675

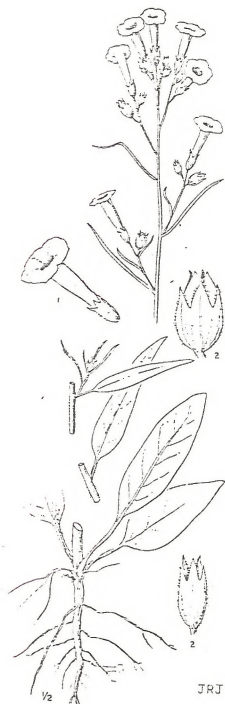
Flowers white, erect, 1.5 feet.

In Artemisia zone with Chrysothamnus.

Open area with sandy, dry soil, elevation 4200 feet,  
Steens Mts. region, 7 miles due northeast of French Glen,  
T. 31 S., R. 32.5E., Sec. 3.

- II. Range: Southern British Columbia and northern Idaho, to Baja, California, Sonora, and Texas, wholly east of the Cascades. June - Sept. (Hitchcock et al., 1959).
- III. Location (BLM-Administered): Douglas County, T. 22 N., R. 23 E., Sec. 30. Sutherland Creek (see field data report for map).
- D. Habitat: Dry sand bottom lands, and in other dry, open places.
- E. Vegetation Type (BLM location): With Conyza canadensis, Artemisia tridentata, Xanthium strumarium.
- F. Population Biology (BLM location): One known plant. Also from records collected in Yakima in 1977; populations in Washington appear drastically reduced.
- G. Tolerance to Disturbance: Not known.
- H. Hazards: Small population, easily destroyed.
- I. Remarks and Recommendations: Further search of the Sutherland Creek and other Columbia River drainages is recommended. The plant located was growing in a dry stream bottom where the seed source is likely to be water distributed. The plant was associated with weedy species, suggesting a factor other than habitat disturbance as the cause of its diminishing occurrence in the State. Protective measures for the plant should include banning all vehicle traffic in that section of the stream bottom (a small enclosure installation if necessary, to ensure protection), informing the grazing leasee of its presence, and soliciting cooperation to allow continuation of the lease (its acrid taste will probably make it undesirable to domestic animals and wildlife), closing the area to recreational use during flowering season.
- J. Other: See attached maps for distribution and floral diagram.

Acknowledgements: Distribution information compliments of Steve Gill, graduate student, Washington State University Botany Dept. Description and floral diagram from Hitchcock et al.



JRJ

*Nicotiana attenuata*



*Nicotiana attenuata*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PLANT TAXON FIELD DATA REPORT

EXAMINER Camp

DATE September 1980

AERIAL PHOTO NO.           

State: <u>WA</u>		County: <u>Douglas</u>		District: <u>          </u>		Land Status: <u>          </u>	
Resource Area		Planning Unit		Allot.			
Name & No.		Name & No.		Name & No.			
Township	Range	Section	$\frac{1}{2}$ Section	FAMILY NAME :			
<u>2 2 N</u>	<u>2 3 E</u>	<u>3 0</u>	<u>1/2 1/2</u>	<u>Solanaceae</u>			

Scientific Name: Nicotiana attenuata Torr ex Wats Common Name: coyote tobacco

Site where observed:             
(Be specific - at or near, map location on back) Sutherland Creek bottom

Occurrence:             
(locally abundant, scarce\*) Scarce

Population size or dimension: 1

Species condition:             
(vigorous, stable, threatened) Threatened

Threat to species or site:             
(evidence of construction, disease or other influences) Bottom of a dry creek bed

           occasionally used as a road. Also grazing in the area.

Flowering: Yes X No            Collection: Yes            Photo:(size) 35 mm

General Comments: This plant's historic distribution covered the Columbia River  
drainage. To date there has been one other siting of this plant in the last 40 years.

Status: Sensitive species on the Working List of Rare, Tolerance to Disturbance: unk  
(Federal, State, other) Endangered and Threatened Vascular Plants in Washington 1979

Major vegetative type: Dry sandy and rocky river bottoms

Associated species: (three most abundant) Artemisia tridentata, Xanthium strumarium

Other species present: Conyza canadensis

Slope % 0-5 Exposure            Elevation 3500 ft Precip.            Soil Type sandy, rocky alluvial  
Management or use: (past & present, if known) Grazing

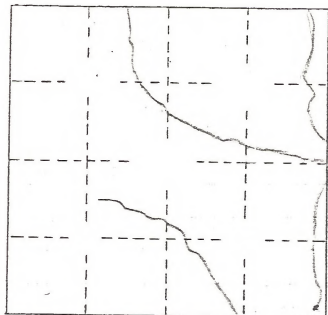
Records consulted: Herbarium records

Persons consulted: Joy Mastroguiseppe, Steve Gill, Rich Old

Physical inspection of the site:             
(time spent & method used) 3 days hiking down the drainage and an adjacent drainage

\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites; 3. Never found on disturbed sites.

Legend:



Sutherland Creek

*Nicotiana attenuata*

Scale:

T22N R23E Sec 30

Remarks:



PORTULACACEAE (Purslane Family)

Talinum spinescens Torr. (Fameflower)

- A. Status: Working List of Rare, Endangered, Threatened Vascular Plant  
Taxa for Washington. Status 1978 undetermined.
- B. Description: Glabrous perennial from a branched caudex, forming tight cushions as much as 15 cm. broad, with few to numerous short, ascending, marcescent, leafy stems up to 8 mm. thick; leaves fleshy, green, linear, 1.5-2.5 cm. long, 1-2.5 mm. broad, deciduous except for the marcescent, hardened, and rigid basal portions which form somewhat spiny projections covering the stem; flowers mostly 10-25 in diffuse, minutely bracteate, ascending cymes 2-15 cm. long, the peduncles naked, up to 15 cm. long; sepals about 3 mm. long; petals pale to deep rose or bright crimson-magenta, broadly elliptic-obovate, 7-10 mm. long, 5---7 mm. broad; capsule 3-5 mm. long; seeds about 1.25 mm. long, more or less completely covered by a grayish, cellular mantle, nearly black and shining where not so covered. (Hitchcock et al., 1977).

C. Distribution:

I. Herbarium Records:

Benton County

Rattlesnake Mt. Crest,  
6/1971 T. Thomas  
WSU

Crest of Rattlesnake Mt. Artemisia/Agropyron lithoslic  
association. Growing in exposed rocky soil southwest facing  
slope, altitude 3500.  
4/1971 T. Thomas  
WSU

Sparse across Rattlesnake Mt., only blooms for a few days.  
5/1978 R. Sauer 1979

Douglas County

Grand Coulee, 3000 feet.  
6/15/1947 T. M. C. Taylor 1107, 34903  
UBC

Scablands @ 8 miles west at Delrio, stamens 15-25 petals bright  
deep red.  
6/1948 C. L. Hitchcock 17486  
WSU USNH WTU ID

Douglas County (Cont.)

Moses Coulee east at Farmer. Artemisia rigida/Poa secunda  
association.

6/1953 R. Daubenmire 53103  
WSU

Coulee City  
7/1892 Lake and Hull  
WSU

Scabland ca 8 miles west of Delrio, Stamens 15-25, Petal bright  
deep red.  
6/19/1948 C. L. Hitchcock 17486.  
ID

Coulee City.  
6/19/1936 A. Eastwood  
CAS

Coole Erabs Creek  
6/1893 J. B. Leiberg  
WSU

Coulee City  
6/1902 C. V. Piper  
WSU

Between Coulee and Waterville  
5/1896 W. J. Spillivar  
WSU

Exposed rocky soil, southwest facing slope, elevation 3500  
feet, Artemisa-Agrophyron lithosolic association. Crest at  
Rattlesnake Mt.  
7/23/1972 O'Farrell 72-231  
WTU

Grant County

North tunnel-portal gate Coyote Canyon  
6/1950 T. H. Scheffer  
WSU

Fls. magenta scab rock out Dry Falls, Coulee City  
6/1923 H. St. John  
WSU

Grant County (Cont.)

Thin rocky soil in Grand Coulee seven miles above Dry Falls.

6/1923 H. T. Rogers

WSU WTU ORE USNH

One mile north at the Coulee City Junction, Artemisia rigida association.

6/1956 J. C. Moomaw

WSU

Ten miles northwest of Coulee City on basaltic outcrops in depression forming potholes.

6/1948 C. L. Hitchcock

WSU WTU

Eastern Washington, Wilson Creek, 2000-3000 feet.

6/1873 Sandberg 1131

WTU

Basaltic ledges above Columbia River, sagebrush slopes, Grand Coulee.

6/22/1933 Thompson 9142

WTU USNH

West side of Highway 17 opposite Dry Falls Museum; found in dried up vernal pool area on basalt pebbles.

5/23/1975 Dunn 191

NYBC

Five miles west of Quincy, Washington.

5/21/1967 R. C. Phillips

SPC

Seven miles west of Quincy, Washington

5/16/1968 R. C. Phillips

SPC

Thin, rocky soil in the Grand Coulee, six miles north of Dry Falls.

6/2/1940 T. Rogers 1941 (595).

South of Highway 17, east side Falls Lake.

6/1972 R. W. Kiser

CENT

Grant County (Cont.)

Park Lake  
6/6/1933 R. W. Kiser  
CENT

Rocky soil, Crab Creek, altitude 730 m.  
6/18/1893 J. B. Leiberg 227 and Sandberg 227.  
ORE USNH

Wilson Creek  
8/1892 Lake and Hull  
WSU

Kittitas County

Shaly hilltop Sentinel Bluff  
6/1903 J. S. Cotton  
WSU USNH

T. 20 N., R. 22 E., basalt.  
5/2/1978 S. Ellis 1978

Elevation 2600 feet, just south Brushy road.  
5/2/1978 S. Ellis 1978

Elevation 3160 feet, east aspect just south of Brushy road.  
5/2/1978 S. Ellis 1978.

Lincoln County

Wilbur, Washington  
7/1892 L. F. Henderson  
WSU

Flowers pale yellow to deep rose associated with Artemisia stricta, frequent, shallow soil on basalt outcrops, ten miles east of Wilbur.  
7/1946 Art Holmgren 26716  
WSU

Occasionally on stony soil four miles south of Wilbur, elevation 2300 feet. Associate vegetation scanty. Corollas deep pink.  
7/1951 M. Bacon  
WSU

Flat basaltic scablands a few miles west of Reardan, near Highway 2.  
6/17/1972 Taylor 4134  
WWB

Lincoln County (Cont.)

Frequent, shallow soil on basalt outcrop, associated with Artemisia stricta, ten miles east of Wilbur.

7/27/1946 Mcguire 96716

WTU USNH DS

Rocky sagebrush plains near Wilbur.

6/30/1931 Thompson 7160

WTU OSC

Harrington 2400 feet.

6/18/1893 J. H. Sandberg 227

Yakima County

Tampico, Washington.

6/1923 Elias Nelson

WSU

North Yakima

1894 W. L. Steiner

WSU

North of Yakima

5/1892 L. F. Henderson

WSU

Common on dry hillsides composed of disintegrated red rock, north Yakima, but common also at Sprague, Wilbur, and other localities.

5/17/1892 Henderson

WTU

Jump-Off Ridge, open rocky slope (only one in area) elevation 3700 feet with Lewisia rediviva.

1978 Norma Anderson 1978

II. Range: Rocky basalt outcrops in central Washington, 1900 to 3500 feet.

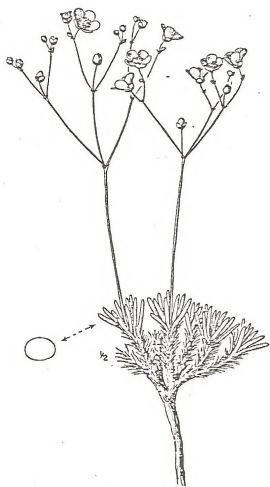
III. Location (BLM-administered): Okanogan County, T. 37 N., R. 27 E., Secs. 22, 35, by Tonasket.

D. Habitat: Basalt outcrops.

E. Vegetational Type. (at BLM location): With Sedum lanceolatum.

- F. Population Biology: Small, discontinuous populations. Flowers late May to early July for a few days only.
- G. Tolerance to Disturbance: May be sensitive, but due to its harsh, isolated habitat, disturbance doesn't appear to be an important factor.
- H. Hazards: Small, sporadic populations.
- I. Remarks and Recommendations: It is recommended the basalt outcrops be left intact. Further survey of surrounding basalt outcrops is needed because this area is a range extension of known distributions. Grazing probably won't affect this species due to the unsuitable nature of its habitat.
- J. Other: See distribution map. Floral diagram.

Acknowledgements: Floral diagram and description from Hitchcock et al.  
Distribution information courtesy of the Washington Natural Heritage Program.



*Talinum spinescens*





UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

EXAMINER G. Horn

PLANT TAXON FIELD DATA REPORT

DATE 6-28-79  
Tonasket, WA USGS 15 min.  
AERIAL PHOTO NO. \_\_\_\_\_

State: <u>Washington</u>		County: <u>Okanogan</u>		District: _____		Land Status: <u>BLM</u>	
Resource Area <u>Upper Columbia</u>		Planning Unit <u>Okanogan</u>		Allot. _____			
Name & No. <u>Upper Columbia</u>		Name & No. <u>Columbia 09</u>		Name & No. <u>0717</u>			
Township	Range	Section	Section	FAMILY NAME :			
<u>37 N</u>	<u>27 E</u>	<u>22</u>	<u>SW 1/4</u>	<u>Portulacaceae</u>			
		<u>35</u>	<u>NW 1/4 SW 1/4</u>				

Scientific Name: Talinum spinescens torr

Common Name: Fame flower

Site where observed: \_\_\_\_\_

(Be specific - at or near, map location on back) Shallow soiled basalt outcrop areas

on ridges. Two areas of occurrence within exchange 1) selected (S. 22) land 2) Offered  
Occurrence: land (S. 34, 35).

(locally abundant, scarce\*) Locally moderate to abundant

Population size or dimension: About 50 plants in 1 acre., Sec. 22 & 20 area in Sec. 35.  
area in a 1/2 acre

Species condition: Stable

Threat to species or site: \_\_\_\_\_

(evidence of construction, disease or other influences) Cattle grazing in both areas  
plant sites isolated (higher elevations and rocky) no obvious current threat.

Flowering: Yes X No \_\_\_\_\_ Collection: No Photo: (size) 35MM

General Comments: Plants initiating anthesis at the time of identification (6-1-79)  
Flowers had withered by 6-19-79. Sites isolated on range tops.

Status: Rare-Oregon Endangered Species Task Force Prov. Tolerance to Disturbance: \_\_\_\_\_  
(Federal, State, other) Washington Natural Heritage List 1978

Major vegetative type: Artemisia tridentata, Agropyron spicatum

Associated species: (three most abundant) 1. Sedum lanceolatum

Other species present: \_\_\_\_\_

Slope 20-45 Exposure \_\_\_\_\_ Elevation 1900-3500 ft Precip. \_\_\_\_\_ Soil Type basalt rock  
Management or use: (past & present, if known) \_\_\_\_\_

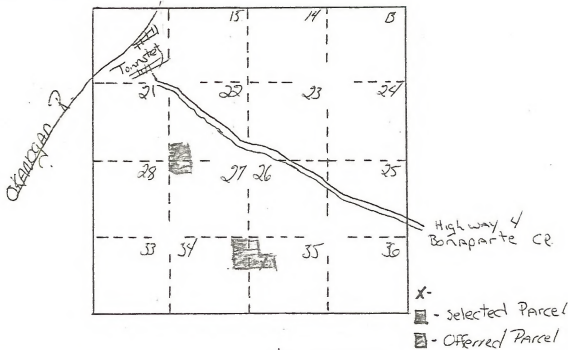
\_\_\_\_\_ & Records consulted: \_\_\_\_\_

Persons consulted: Joy Mastroguiseppe WSU herbarium

Physical inspection of the site: \_\_\_\_\_  
(time spent & method used) ocular recon.

\*If scarce, estimate number of plants. Tolerance to disturbance codes: 1. Very  
tolerant; 2. Occasional on disturbed sites but primarily found on undisturbed sites;  
3. Never found on disturbed sites.

Legend:



Scale:

Remarks:

New Sightings of:

Clematis columbiana

Ferry County

T. 39 N., R. 34 E.,  
Sec. 9. Timber Sale

Pediocactus simpsonii

Douglas County

T. 23 N., R. 22 E.,  
Sec. 36,

T. 23 N., R. 23 E.,  
Sec. 33

T. 22 N., R. 23 E.,  
Sec. 4

Reported by not confirmed, five miles  
south of Ellensburg in Yakima County

Cryptantha leucophaea

Franklin County

T. 10 N., R. 30 E.,  
Sec. 8  
Sec. 7  
Sec. 18

# PLANTS BY COUNTY

Technical Name	Common Name	<div>Benton</div> <div>Douglas</div> <div>Perry</div> <div>Okanogan</div> <div>Franklin</div> <div>Yakima</div> <div>Stevens</div>						
Aceraceae								
<u>Acer glabrum</u> Torr.	Rocky Mountain maple			x	x			
Amaranthaceae								
<u>Amaranthus albus</u> L.	white pigweed		x					
Anacardiaceae								
<u>Rhus glabra</u> L.	smooth sumac		x					
<u>Rhus radicans</u> L.	poison ivy	x			x			
Apocynaceae								
<u>Apocynum androsaemifolium</u> L.	spreading dogbane		x					
Asclepiadaceae								
<u>Asclepias speciosa</u> Torr.	snowy milkweed				x			
Berberidaceae								
<u>Berberis repens</u> Lindl.	creeping Oregongrape			x	x			
Betulaceae								
<u>Alnus</u> spp.	alder			x	x			
<u>Betula glandulosa</u> Michx.	scrub birch		x					
<u>Betula occidentalis</u> Hook	water birch		x					
<u>Betula</u> spp.	birch			x	x			
Boraginaceae								
<u>Amsinckia lycopsooides</u> Lehm.	fiddleneck	x				x		
<u>Cryptantha flaccida</u> (Dougl.) Green	cryptantha	x						
<u>Cryptantha leucophaea</u> (Dougl.) Pays.	cryptantha					x		
<u>Cryptantha pterocarya</u> (Torr.) Greene	cryptantha	x				x		
<u>Cryptantha</u> spp.	cryptantha		x					
<u>Cynoglossum officinale</u> L.	common hounds-tongue				x			
<u>Lappula echinata</u> Gilib.	stick tight					x		
<u>Lithospermum ruderales</u> Dougl.	white stoneseed	x			x			
<u>Mertensia oblongifolia</u> (Nutt.) G. Don	bluebells		x					
<u>Mertensia</u> spp.	bluebells			x				

# PLANTS BY COUNTY

Technical Name	Common Name	Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
<b>Cactaceae</b>								
<u>Pediocactus simpsonii</u> (Engelm.) Britt. & Brown	Simpson hedgehog cactus	x						
<u>Opuntia</u> sp. Mill	prickly-pear cactus		x	x				
<b>Caprifoliaceae</b>								
<u>Linnaea borealis</u> L.	northern twinflower		x				x	
<u>Lonicera</u> spp.	honeysuckle		x				x	
<u>Sambucus cerulea</u> Raf.	elderberry	x	x	x				
<u>Symphoricarpos albus</u> (L) Blake	common snowberry		x					
<u>Symphoricarpos oreophilus</u> Gray	mountain snowberry		x	x				
<b>Caryophyllaceae</b>								
<u>Arenaria franklinii</u> var. <u>franklinii</u> Dougl.	Franklin sandwort				x			
<u>Cerastium nutans</u> raf.	chickweed			x				
<u>Lianthus armeria</u> L.	pink		x					
<u>Holosteum umbellatum</u> L.	jagged chickweed				x			
<u>Lithophragma bulbifera</u> Rydb.	bulbiferous woodlandstar				x			
<u>Lithophragma</u> spp.	woodland star	x	x					
<u>Silene douglasii</u> var. <u>douglasii</u>	silene			x				
<u>Silene menziesii</u> Hook	Menzie's silene		x					
<b>Celastraceae</b>								
<u>Pachistima myrsinites</u> (Pursh) Raf.	boxwood		x					
<b>Chenopodiaceae</b>								
<u>Atriplex spinosa</u> (Hook.) collotzi	saltbush	x	x					
<u>Chenopodium ambrosioides</u> L.	goosefoot		x					
<u>Chenopodium leptophyllum</u> (Moq.) Wats.	narrow leaf lambsquarters		x		x			
<u>Salicornia rubra</u> Nels	red glasswort			x				
<u>Salsola kali</u> L.	Russian thistle	x			x			
<b>Compositae</b>								
<u>Achillea millefolium</u> L.	common yarrow	x	x	x	x	x		
<u>Anaphalis margaritacea</u> (L) B&H	pearly-everlasting		x					
<u>Antennaria anaphaloides</u> Rydb.	tall pussy-toes			x				
<u>Antennaria microphylla</u> Rydb.	rosy pussy-toes				x			
<u>Antennaria racemosa</u> Hook	raceme pussy-toes			x				
<u>Arnica cordifolia</u> Hook	heart-leafed arnica			x				
<u>Artemisia dracunculoides</u> L.	green sagewort	x						

PLANTS BY COUNTY

Technical Name	Common Name	Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
<b>Compositae (Cont.)</b>								
<u>Hieracium albiflorum</u> Hook.	white hawkweed							x
<u>Hymenopappus filifolius</u> Hook.	hymenopappus					x		
<u>Iva xanthifolia</u> Nutt.	tall marsh-elder	x						
<u>Lactuca pulchella</u> (Pursh) DC.	wire lettuce		x					
<u>Lagophylla ramoisissima</u> Nutt.	bareleaf	x						
<u>Layia glandulosa</u> (Hook) H&A	tidytips					x		
<u>Machaeranthera canescens</u> (Pursh) Gray	hoary aster					x		
<u>Microseris toximoides</u> Gray	microseris	x						
<u>Rudbeckia</u> spp.	cone flower				x			
<u>Senecio triangularis</u> Hook.	groundsel						x	
<u>Solidago canadensis</u> L.	Canada goldenrod	x			x			
<u>Solidago</u> spp.	goldenrod				x			
<u>Sonchus oleraceus</u> L.	common solo-thistle				x			
<u>Stephanomeria tenuifolia</u> (Torr.) Hall	skeletonweed	x			x			
<u>Tanacetum vulgare</u> L.	common tansy				x			
<u>Taraxacum officinale</u> Weber	common dandelion			x	x			
<u>Townsendia florifer</u> (Hook.) Gray	townsendia	x						
<u>Tragopogon dubius</u> Scop.	yellow salsify	x		x	x	x		
<u>Xanthium strumarium</u> L.	common cocklebur		x					
<b>Cornaceae</b>								
<u>Cornus canadensis</u> L.	bunchberry dogwood			x	x			
<u>Cornus stolonifera</u> Michx.	dogwood		x					
<b>Crassulaceae</b>								
<u>Sedum lanceolatum</u> Torr.	stonecrop			x	x			
<b>Cruciferae</b>								
<u>Arabis sparsiflora</u> Nutt.	rockcress		x					
<u>Arabis</u> spp.	rockcress		x		x			
<u>Cardaria</u> spp.	whitetop		x					
<u>Chorispora tenella</u> (Pall.) DC.	chorispora		x					
<u>Draba verna</u> var. <u>verna</u> L.	spring draba						x	
<u>Descurainia pinnata</u> (Walt.) Britt.	tansymustard	x					x	
<u>Erysimum asperum</u> (Nutt) DC.	plains wallflower	x					x	
<u>Lappula redowskii</u> (Hornem.) Greene	stick seed	x					x	
<u>Lepidium montanum</u> Nutt.	pepperweed		x					

# PLANTS BY COUNTY

Technical Name	Common Name	Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
<b>Cruciferae (Cont.)</b>								
<u>Lepidium perfoliatum</u> L.	clasping leaf pepperweed	x						
<u>Lesquerella douglasii</u> Wats.	bladderpod				x			
<u>Phoenicaulis cheiranthoides</u> Nutt.	daggerpod	x						
<u>Rorippa nasturtium aquaticum</u> L. Schinz. Thell	watercress	x						
<u>Sisymbrium altissimum</u> L.	Jim Hill mustard	x						
<b>Cupressaceae</b>								
<u>Juniperus occidentalis</u> Hook.	western juniper					x		
<u>Juniperus</u> spp.	juniper	x	x					
<u>Thuja plicata</u> Donn.	western red cedar			x				
<b>Cyperaceae</b>								
<u>Carex concinnoides</u> Mack.	northwestern sedge							x
<u>Carex hoodii</u> Boott	Hoods sedge				x			
<u>Carex</u> spp. L.	woolly sedge				x			
<u>Eleocharis paulustris</u> (L) R&G	creeping spike-rush	x		x				
<u>Scirpus acutus</u> Muhl	hardstem bulrush				x			
<u>Scirpus microcarus</u> Presl	panicled bulrush	x					x	
<b>Elaeagnaceae</b>								
<u>Shepardia canadensis</u> (L) Nutt.	Canada buffalo berry		x	x				
<b>Ericaceae</b>								
<u>Chimaphila umbellata</u> (L) Bart.	Prince's pine		x					
<u>Arctostaphylos uva-ursi</u> (L) Spreng.	bearberry, kinnikinnick		x					
<u>Pyrola</u> spp.	Wintergreen			x				
<b>Euphorbiaceae</b>								
<u>Euphorbia</u> spp.	spurge	x						
<b>Gentianaceae</b>								
<u>Gentiana amarella</u> L.	gentian		x					
<b>Geraniaceae</b>								
<u>Erodium cicutarium</u> (L) L'Her.	cutleaf filaree				x			
<b>Grossulariaceae</b>								
<u>Ribes aureum</u> Pursh	golden currant	x						
<u>Ribes cereum</u> var. <u>cereum</u> Dougl.	wax currant	x	x					



# PLANTS BY COUNTY

Technical Name	Common Name	Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
Grossulariaceae (Cont.)								
<u>Ribes lacustre</u> (Pers.) Poir	prickly currant		x					
<u>Ribes</u> spp.	currant		x	x			x	
Hydrangeaceae								
<u>Philadelphus lewisii</u> Pursh.	Lewis mockorange	x	x	x				
Hydrophyllaceae								
<u>Hydrophyllum capitatum</u> Dougl.	Ballhead waterleaf		x	x				
<u>Phacelia hastata</u> var. Dougl.	phacelia	x				x		
<u>Phacelia linearis</u> (Pursh) Holz	threadleaf phacelia		x			x		
<u>Phacelia</u> spp. Juss.	phacelia					x		
Hypericaceae								
<u>Hypericum perforatum</u> L.	goatweed				x		x	
daceae								
<u>Sisyrinchium angustifolium</u> Mill.	blue eyegrass				x			
Juncaceae								
<u>Juncus balticus</u> Wikst.	baltic rush		x					
<u>Juncus bufonius</u> L.	toad rush		x					
<u>Juncus ensifolius</u> Wikst.	dagger leaf rush		x					
<u>Juncus tenuis</u> var. <u>dudleyi</u>	slender rush		x					
<u>Juncus</u> L.	rush				x			
Labiatae								
<u>Leonurus cardiaca</u> L.	motherwort						x	
<u>Lycopus asper</u> Greene	water horehound		x		x			
<u>Mentha arvensis</u> L.	wild mint						x	
<u>Monardella odoratissima</u> Benth	Monardella	x						
<u>Nepeta cataria</u> L.	catnip		x					
<u>Prunella vulgaris</u> L.	self-heal			x			x	
<u>Salvia doriai</u> var. <u>carnosa</u> (Dougl.) Cronq.	purple sage	x	x					
Leguminosae								
<u>Astragalus canadensis</u> L.	Canada milkvetch		x				x	
<u>Astragalus leigbergii</u>	milkvetch		x					
<u>Astragalus lentiginosus</u> spp.	specklepod locoweed	x						
<u>lentiginosus</u> Dougl.								
<u>Astragalus miser</u> var. <u>serotinus</u> (Gray) Barneby	timber milkvetch				x			



# PLANTS BY COUNTY

Technical Name	Common Name	Benton	Douglas	Ferty	Ozarkian	Franklin	Yakima	Stevens
<b>Leguminosae (Cont.)</b>								
<u>Astragalus purshii</u>	woolypod milkvetch		x		x			
<u>Astragalus purshii</u> var. <u>glareosus</u> (Dougl.) Barneby	woolypod milkvetch	x						
<u>Astragalus spaldingii</u> Gray	Spalding milkvetch	x						
<u>Astragalus</u> spp. L.	milkvetch				x			
<u>Lathyrus pauciflorus</u> Fern	peavine			x				
<u>Lotus corniculatus</u> L.	birdsfoot-trefoil				x			
<u>Lupinus leucophyllus</u> Dougl	velvet lupine		x					
<u>Lupinus</u> spp. L.	lupine	x	x	x	x			
<u>Medicago sativa</u> L.	alfalfa			x				
<u>Melilotus alba</u> Desr.	white sweet clover			x				
<u>Melilotus officinalis</u> (L)	yellow sweet clover	x	x	x				
<u>Psoralea lanceolata</u> Pursh	lemon scurf pea					x		
<u>Trifolium agrarium</u> L.	clover			x				
<u>Trifolium</u> spp.					x			
<b>Liliaceae</b>								
<u>Allium acuminatum</u> Hook.	tapertip onion	x						
<u>Allium cernuum</u> Roth	wild onion			x				
<u>Allium</u> spp. L.	wild onion			x				
<u>Brodiaea douglasii</u> Wats.	wild hyacinth	x				x		
<u>Calochortus macrocarpus</u> Dougl.	sagebrush mariposa	x		x				
<u>Disporum</u> spp.	fairy-bell			x	x			
<u>Fritillaria pudica</u> (Pursh) Spreng.	fritillary			x		x		
<u>Lilium columbianum</u> Hanson	tiger lily			x				
<u>Smilacina stellata</u> (L) Desf.	starry Solomon's seal			x	x			
<u>Trillium ovalifolium</u> Pursh	white trillium						x	
<u>Zigadenus</u> spp. Michx.	death camas	x		x	x			
<b>Linaceae</b>								
<u>Linum perenne</u> L.	flax					x		
<b>Loasaceae</b>								
<u>Mentzelia albicaulis</u> Dougl.	whitestar mentzelia	x			x	x		
<u>Mentzelia laevicaulis</u> (Dougl.) T&C	blazing star	x			x			
<b>graceae</b>								
<u>Comissonia contorta</u> (Dougl.) Raven	evening primrose					x		
<u>Circaea alpina</u> L.	alpine circaea				x			

# PLANTS BY COUNTY

Technical Name	Common Name							
		Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
<u>Circaea alpina</u> L.	alpine circaea			x				
<u>Clarkia pulchella</u> Pursh	deerhorn clarkia					x		
<u>Epilobium glandulosum</u> Lehm	common willoweed							x
<u>Epilobium minutum</u> Lindl.	willow weed	x						
<u>Epilobium</u> spp.					x			
<u>Oenothera pallida</u> Lindl.	evening primrose	x				x		
Orchidaceae								
<u>Calypto bulbosa</u> (L.) Oakes	fairyslipper orchid			x				
<u>Goodyera oblongifolia</u> Raf.	western rattlesnake plantain				x			
Pinaceae								
<u>Abies grandis</u> (Dougl.) Forbes					x			
<u>Larix occidentalis</u> Nutt	tamarack, mountain larch			x	x			
<u>Picea engelmannii</u> Parry	Engelmann spruce			x				
<u>Pinus ponderosa</u> Dougl	ponderosa pine, yellow pine				x	x		
<u>Pseudotsuga menziesii</u> (Mirbel)	Douglas-fir			x	x			
<u>Tsuga heterophylla</u> (Raf.) Sarg	western hemlock			x				
Plantaginaceae								
<u>Plantago lanceolata</u> L.	narrowleaf plantain		x					
<u>Plantago patagonica</u> Jacq.	desert Indianwheat	x			x	x		
Poaceae								
<u>Agropyron cristatum</u> (L.) Gaertn	crested wheatgrass	x						
<u>Agropyron dasytachyum</u> Hook. Scribn.	thickspike wheatgrass					x		
<u>Agropyron repens</u> Beauv	quackgrass				x			
<u>Agropyron spicatum</u> (Pursh)	bluebunch wheatgrass	x	x	x	x	x		
<u>Agrostis alba</u> L.	redtop	x						
<u>Agrostis humilis</u> Vasey	alpine bentgrass				x			
<u>Agrostis scabra</u> Willd.	tickleggrass				x			
<u>Aristida longiseta</u>	red threeawn					x		
<u>Avena sativa</u> L.	common oat					x		
<u>Bromus inermis</u> Leys.	smooth brome					x		
<u>Bromus tectorum</u> L.	cheatgrass	x	x	x	x	x		
<u>Calamagrostis rubescens</u> Buckl.	pinegrass			x	x			
<u>Cinna latifolia</u> (Trevier) Griseb.	drooping woodreed			x				

# PLANTS BY COUNTY

Technical Name	Common Name	Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
<b>Poaceae (cont.)</b>								
<u>Dactylis glomerata</u> L.	orchard-grass						x	
<u>Distichlis stricta</u> (Torr.) Rydb.	alkali saltgrass						x	
<u>Echinochloa crusgalli</u> (L.)	Japenese millet						x	
<u>Eleocharis palustris</u> (L.) R&S	creeping spike-rush						x	
<u>Elymus cinereus</u> Scribn & Merr.	basin wildrye	x					x	
<u>Elymus giganteus</u> Vahl	Siberian wildrye							
<u>Festuca subulata</u> Trin.	fescue			x				
<u>Festuca</u> spp. L.	fescue							
<u>Glyceria striata</u> (Fam) Hitchc	fowl mannagrass						x	
<u>Hordeum jubatum</u> L.	foxtail barley	x					x	
<u>Koeleria cristata</u> Pers.	prairie junegrass	x		x	x	x		
<u>Mulhenbergia richardsonis</u>	mat muhly		x					
<u>Oryzopsis hymenoides</u> (R&S) Ricker	Indian ricegrass	x				x		
<u>Phalaris arundinacea</u> L.	reed canary grass	x						
<u>Phleum pratense</u> L.	Timothy				x			
<u>Poa nevadensis</u> Vasey	Nevada bluegrass	x						
<u>Poa pratensis</u> L.	Kentucky bluegrass				x	x		
<u>Poa sandbergii</u> Vasey	Sandberg's bluegrass				x	x		x
<u>Poa scabrella</u> (Thurb.) Benth.	pine bluegrass	x						
<u>Poa</u> L.	bluegrass			x	x			
<u>Polypogon monspeliensis</u> (L.) Desf.	rabbitfoot grass		x					
<u>Setaria viridis</u> (L.) Beauv.	green bristlegrass					x		
<u>Sitanion hystrix</u> (Nutt.) Smith	bottlebrush squirreltail	x				x		
<u>Stipa comata</u> Trin. & Rupr.	needle-and-thread					x	x	
<u>Stipa occidentalis</u> Thurb.	western needlegrass					x		
<u>Stipa thurberiana</u> Piper	thurber needlegrass	x						
<u>Stipa</u> spp.	needlegrass			x				
<b>Polemoniaceae</b>								
<u>Gilia aggregata</u> (Pursh.) Spreng.	skyrocket gilia					x		
<u>Leptodactylon pungens</u> (Torr.)	spiny phlox		x			x		
<u>Linanthus pharnaceoides</u> (Benth.) Greene	linanthus	x						
<u>Microsteris gracilis</u> var. <u>gracilis</u>	microsteris		x			x		
<u>Phlox longifolia</u> Nutt.	longleaf phlox	x	x			x		
<u>Polemonium micranthum</u> Benth.	Jacob's ladder						x	

# PLANTS BY COUNTY

Technical Name	Common Name	Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
<b>Polygonaceae</b>								
<u>Eriogonum compositum</u> Dougl.	northern buckwheat	x						
<u>Eriogonum heracleoides</u> Nutt.	Wyeth buckwheat			x				
<u>Eriogonum microthecum</u> Nutt.	slenderbrush buckwheat	x						
<u>Eriogonum niveum</u> Dougl.	snow eriogonum	x			x			
<u>Eriogonum sphaeracephalum</u> Dougl.	rock eriogonum	x	x					
<u>Eriogonum strictum</u> spp.	eriogonum	x						
<u>proliferum</u> (T&G) Stokes								
<u>Eriogonum thymoides</u> Benth.	thyme eriogonum	x						
<u>Polygonum aviculare</u> L.	knotweed	x						
<u>Polygonum majus</u> (Meisn) Piper	knotweed				x			
<u>Polygonum persicaria</u> L.	heartweed	x						
<u>Rumex venosus</u> Pursh.	veiny dock				x			
<b>Podiaceae</b>								
<u>Gymnocarpium dryopteris</u> (L.) Newm.	oakfern			x				
<u>Woodsia oregana</u> D.C. Eat.	woodsia	x	x	x				
<u>Woodsia scopulina</u> D.C. Eat.	woodsia				x			
<b>Portulacaceae</b>								
<u>Claytonia lanceolata</u> Pursh.	springbeauty			x				
<u>Lewisia rediviva</u> Pursh.	bitterroot				x			
<u>Montia perfoliata</u> (Donn.) Howell	miner's lettuce					x		
<u>Talinum spinescens</u> Torr.	flameflower				x			
<b>Primulaceae</b>								
<u>Dodecatheon conjugens</u> var. <u>conjugens</u> Greene	shooting star	x						
<b>Ranunculaceae</b>								
<u>Aquilegia formosa</u> Fisch.	columbine			x				
<u>Clematis columbiana</u> var. <u>columbiana</u> (Nutt.) T&G	clematis			x				
<u>Clematis ligusticifolia</u> Nutt.	virginsbower				x			
<u>Delphinium nuttallianum</u> var. <u>nuttallianum</u> Pritz.	nuttall larkspur	x				x		
<u>Delphinium</u> spp. L.	larkspur			x	x			
<u>otentilla gracilis</u> var. <u>pulcherrima</u> (Lehm) Fern	soft cinquefoil				x			

# PLANTS BY COUNTY

Technical Name	Common Name	County						
		Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
Ranunculaceae								
<u>Potentilla</u> spp.	cinquefoil		x	x				
<u>Ranunculus glaberrimus</u> Hook.	sagebrush buttercup	x						
<u>Ranunculus sceleratus</u> L.	buttercup	x						
Roseaceae								
<u>Amelanchier alnifolia</u> Nutt	Saskatoon serviceberry	x		x				
<u>Crataegus columbiana</u> Howell	hawthorn			x				
<u>Fragaria</u> spp.	strawberry		x	x				x
<u>Geum macrophyllum</u> Willd.	geum							x
<u>Geum triflorum</u> Pursh	prairie smoke			x				
<u>Holodiscus discolor</u> (Pursh.) Maxim.	ocean-spray		x	x				
<u>Physocarpus malvaceus</u> (Greene) Kuntze	ninebark		x					
<u>Prunus virginiana</u> L.	common chokecherry	x	x	x				
<u>Potentilla biennis</u>	potentilla	x						
<u>Rhus tridentata</u> (Pursh) DC	antelope bitterbrush				x			
<u>Rosa</u> spp. L.	rose	x	x	x	x			
<u>Sorbus</u> spp.					x			
<u>Spiraea betulifolia</u> var. <u>lucida</u> Dougl.	white spirea			x	x			
Rubiaceae								
<u>Galium</u> spp.	bedstraw	x		x				x
Salicaceae								
<u>Populus tremuloides</u> Michx	quaking aspen	x	x	x				
<u>Populus trichocarpa</u> T&G	black cottonwood	x						
<u>Salix amygdaloides</u> Anderss.	peach-leaved willow	x						
<u>Salix exigua</u> spp. <u>melanopsis</u> (Nutt) Cronq.	dusky willow	x						
<u>Salix lasiandra</u> Benth.	willow	x						
<u>Salix</u> spp. L.	willow				x			
Santalaceae								
<u>Comandra umbellata</u> (L.) Nutt	bastard toadflax			x	x			
Saxifragaceae								
<u>Heuchera cylindrica</u> var. <u>cylindrica</u> Dougl.	alumroot	x	x	x				
<u>Mitella</u> spp.	miterwort		x					
<u>Marilla trifoliata</u> var. <u>unifoliata</u> (Hook) Kuntz	one-leaf foamflower		x					

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Technical Name	Common Name	Benton Douglas Ferry Ok-anogan Franklin Yakima Stevens						
Scrophulariaceae								
<u>Castilleja cervina</u> Greenm	Indian paintbrush			x	x			
<u>Castilleja hispida</u> var. <u>hispida</u> Benth.	Indian paintbrush			x				
<u>Castilleja thompsonii</u> Pennell	Indian paintbrush	x	x					
<u>Castilleja</u> spp.					x			
<u>Collinsia parviflora</u> Lindl.	blue-eyed Mary			x		x		
<u>Mimulus guttatus</u> DC	common monkey-flower		x					x
<u>Mimulus moschatus</u> Dougl.	monkey-flower		x					
<u>Mimulus tilingii</u> Regel.	monkey-flower			x	x			
<u>Orthocarpus</u> spp. Nutt.	owl clover				x			
<u>Penstemon acuminatus</u> Dougl.	sharp-leafed penstemon				x	x		
<u>Penstemon confertus</u> Dougl.	penstemon					x		
<u>Penstemon fruticosus</u> var. <u>serratus</u> (Keck) Cronq.	shrubby penstemon					x		
<u>Penstemon gairdneri</u> var. <u>gairdneri</u> Hook	penstemon		x					
<u>Penstemon pruinosis</u> Dougl.	Chelan penstemon		x			x		
<u>Penstemon richardsonii</u> Dougl.	Penstemon		x					
<u>Penstemon speciosus</u> Dougl.	royal penstemon	x						
<u>Penstemon</u> spp. Mitch.	penstemon							
<u>Verbascum thapsis</u> L.	mullein				x	x		
<u>Veronica</u> spp.	speedwell					x		
Solanaceae								
<u>Datura</u> spp.	Jimson weed		x					
<u>Nicotiana attenuata</u> Torr. ex. Wats.	coyote tobacco			x				
<u>Solanum dulcamara</u> L.	climbing nightshade					x		
Typhaceae								
<u>Typha latifolia</u> L.	cattail			x				
Umbelliferae								
<u>Cicuta douglasii</u> (DC) Coul. & Rose	water hemlock			x				
<u>Cryopteris terebinthinus</u> (Hook) T&G	cymopterus			x			x	
<u>Lomatium greyi</u> Coul. & Rose	lomatium	x	x				x	
<u>Lomatium triternatum</u> (Pursh) Coul. & Rose	nine-leaf lomatium							
<u>Lomatium</u> spp.						x		



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Technical Name	Common Name	Benton	Douglas	Ferry	Okanogan	Franklin	Yakima	Stevens
Urticaceae								
<u>Urtica dioica</u> L.	stinging nettle	x	x	x				
Valerianaceae								
<u>Plectritis macrocera</u>	plectritis	x			x			
Verbenaceae								
<u>Verbena bracteata</u> Jag & Rodr.	bracted verbena	x						
Violaceae								
<u>Viola adunca</u> var. <u>adunca</u> Sm.	hook violet				x			
<u>Viola trinervata</u> Howell	violet	x						
<u>Viola</u> spp.			x				x	
Zygophyllaceae								
<u>Trivulus terrestris</u> L.	puncture vine	x						